FIRST LOOK: 200-MHz PENTIUM PCs • HOW TO GET GREAT INTERNET SERVICE

CONSUMER ALERT
RAM SCAM!

PC WORLD

July 1996

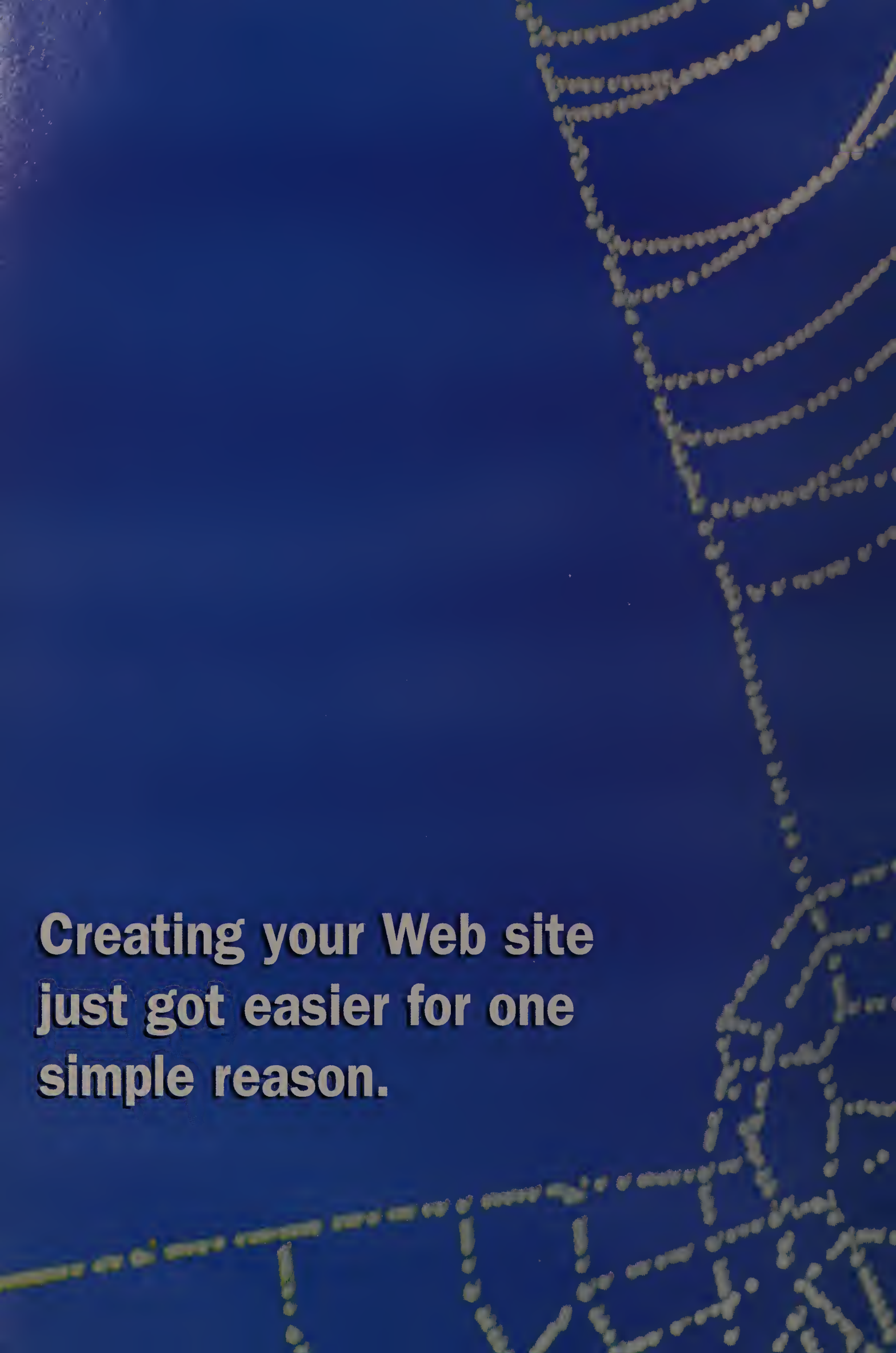
THE ULTIMATE BUYERS GUIDE

BEST PRODUCTS OF 1996

82 WORLD CLASS WINNERS

PLUS
Windows 95 and NT: What's Next?
Hot Picks for Home Offices
Latest Top 20 PCs and More

$5.95 USA
Printed in USA
07
0 70992 37771 8


Creating your Web site
just got easier for one
simple reason.

Microsoft
WHERE DO YOU WANT TO GO ONLY?

Introducing Microsoft FrontPage. The easy and fast way to create and manage your Web site.

If you can click, drag, and drop, you can do it.

Creating your Web site used to be difficult and time-consuming, but that's a thing of the past. Now, Microsoft® FrontPage™ takes the mystery out of Web site creation and management. With easy-to-use functionality that makes creating tables and frames as easy as clicking your mouse, no code will stand in the way of you and your Web site. And because the FrontPage Web authoring and management tool incorporates the familiar interface of Microsoft Office for Windows 95, it works just like the tools and programs you already know.

Create exciting Web sites.

Microsoft FrontPage gets you up and running fast. With the help of Wizards and templates, you can create unique individual pages or Web sites for an Intranet or the Internet easily. And with WebBot™ components, you can add great features like forms, full-text searches and other interactive functions so your site will really come to life.

Management made easy.

Web sites are dynamic and now you can make changes to your site on the fly. Microsoft's FrontPage Explorer gives you the tools you need to manage your Web site. Whether using the Outline view to see a hierarchical representation of your site or utilizing the AutoCorrect Spellline to easily update your broken links, customizing, maintaining and launching a Web site just doesn't get any easier.

And finally, with the FrontPage Server Extensions, you can host your Web site on Web servers running on the Microsoft Windows® 95 operating system, Microsoft Windows NT,® or several varieties of UNIX.®

New Microsoft FrontPage. The best tool for creating and managing professional Web sites without programming.

no code between you and your Web site.

New Microsoft FrontPage is now available for $149* ERP.
Call (800) 426-9400 for the name of a reseller near you.
Or visit www.microsoft.com/frontpage/.

Windows 95 product [illegible] for a $40 [illegible]. Offer good thru [illegible]/31/97. © [illegible] 96 Microsoft Corporation. All rights [illegible] Microsoft, Windows and Windows NT are [illegible] FrontPage, WebBot and *Where do you want to go today?* are trademarks of [illegible] Corporation. UNIX is a registered trademark in the U.S. and other countries, licensed exclusively through X/Open Company, Ltd.

Earl the printer sure is going to miss you.

Your days of running to Earl at all hours are over. Thanks to the Canon Convertible™ Color Printer, the MultiPASS™ C2500. It's the only way to bring home brilliant color Bubble Jet™ printing, plain paper faxing, copying and

scanning. All in one solid machine, backed by our 24-hour InstantExchange warranty program. It even has exclusive Canon® Creative software. So you and the kids can do lots of imaginative things. Want to know more? See our web site, http://www.ccsi.canon.com or call 1-800-848-4123, Ext. 444. Hey, you can still keep in touch with old Earl. Just send him a fax.

Canon

©1996 Canon Computer Systems, Inc. Canon is a registered trademark and Bubble Jet, Convertible and MultiPASS are trademarks of Canon Inc. CCSI, 2995 Redhill Ave., Costa Mesa, CA 92626. In Canada, call 1-800-263-1121, Ext. 444

NEC Doesn't Have It.

Sony's Is More Expensive.

TECHNITRON

free

MAG Innovision Co., Inc. • 2801 South Yale St., Santa Ana, CA 92704 • TEL 800-827-3998 or 714-751-2008 • FAX 714-751-5522 • MAGic FAX-On-Demand: 714-751-0166

©1996 MAG Innovision Co., Inc. All rights reserved. The following are trademarks of their respective companies: Colorific of Sonnetech, Ltd.; Kodak Color Management Software of Eastman Kodak Company; Trinitron and Multiscan of Sony
Star Guidelines for energy efficiency. Prices and specifications based on information published by the manufacturers as of 2/16/96. Actual price may vary. Specifications subject to change without notice. *All uses of Trinitron

MAG-nified performance
MAG-nificent color
MAG-Trinitron®*

Technitron™ is Trinitron®* Plus.

Forget NEC and Sony. Your best value in hi-res color monitors with advanced Trinitron® CRT is Technitron from MAG InnoVision.

VERTICALLY FLAT — superb image quality and reduced distortion.

ULTRA FINE 0.25mm APERTURE GRILLE — super sharp focus and definition. The unique technology enhances brilliance and contrast to levels other monitors can't match.

MAG InnoVision DX15T	Sony Multiscan® 15sx	NEC MultiSync® XE15	MAG InnoVision DX17T	Sony Multiscan® 17sf II	NEC MultiSync® XV17+
Trinitron®*	Trinitron®	Conventional Flat Square Tube	Trinitron®*	Trinitron®	Conventional Flat Square Tube
0.25mm	0.25mm	0.28mm	0.25mm	0.25mm	0.28mm
14"**	13.9"**	13.8"**	16.1"**	16"**	15.6"**
MSRP $459	MSRP $549	ESP $575	MSRP $859	MSRP $1,099	ESP $849

**Viewable. (All Technitron monitors include: EPA Energy Star Compliant power management; SWEDAC MPR II compliant low emissions; 3-year Limited Warranty; award winning service (extended service plans optional); recyclable packaging; and no CFC's used in manufacturing.)

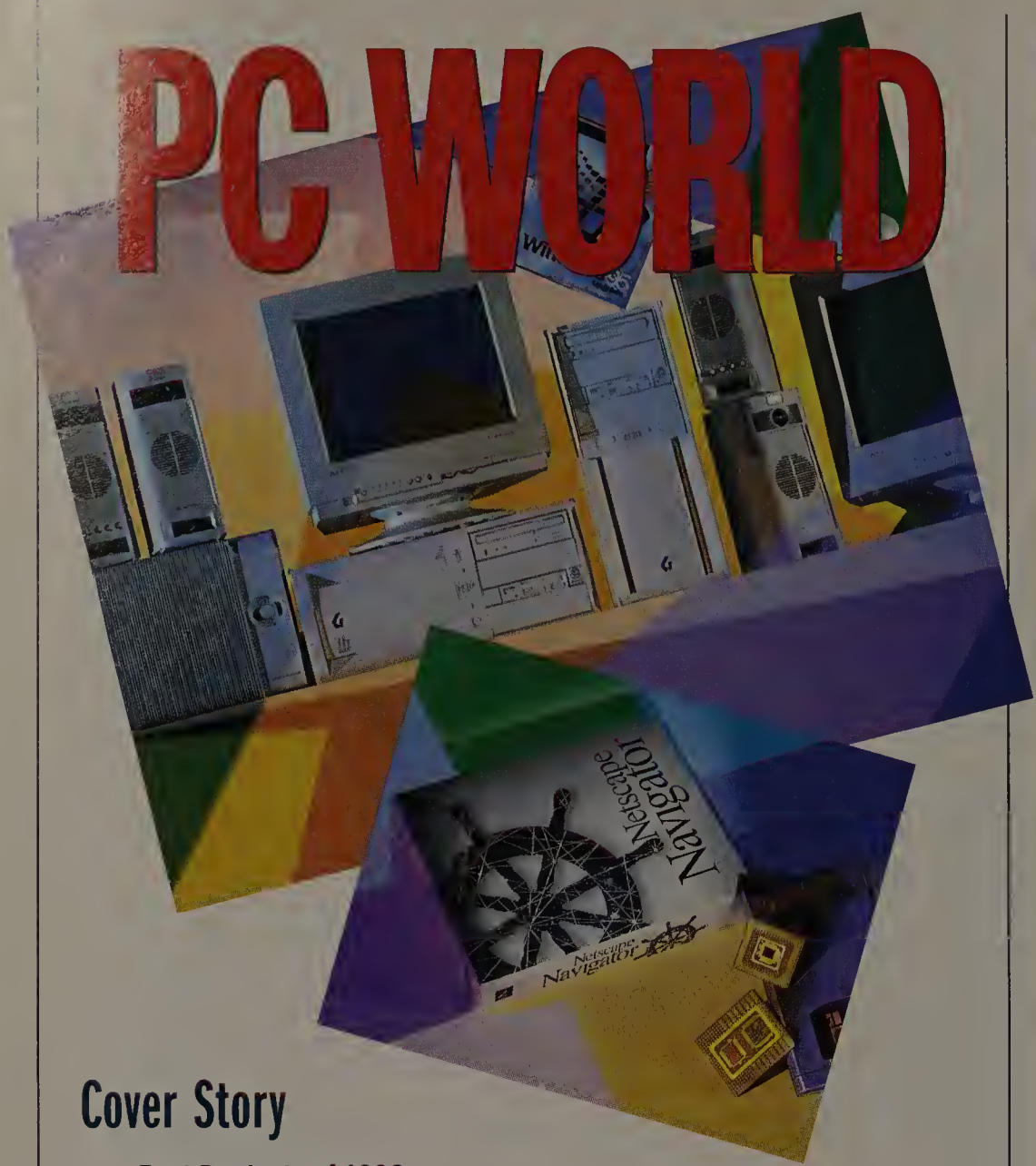
MICROPROCESSOR - based digital controls deliver unrivaled flexibility with Plug & Play ease for Windows® 95 compatibility.

NEC doesn't have it. Sony's is more expensive. For the best value in Trinitron®* color technology — buy Technitron from MAG InnoVision. Discover why monitor buyers across the country are switching to Technitron — The Other Trinitron®* from MAG InnoVision. **Call 1-800-827-3998 ext.163** for the MAG Authorized Ultimate Reseller near you.

The Other Trinitron®*
http://www.maginnovision.com

Come see us at PC Expo Booth #2254
Circle 144 on reader service card

ultiSync of NEC Technologies, Inc.; Windows of Microsoft Corporation. All other trademarks are the property of their respective owners. As an Energy Star Partner, MAG InnoVision has determined that these products meet the Energy efer to CRT technology only. The DX17T and DX15T use a Trinitron® CRT.



Cover Story

96 Best Products of 1996
For our 14th annual World Class awards, *PC World* asked 2000 experts to vote for the best products of the year. The result: the ultimate buyers guide to outstanding hardware, software, and services. From systems to CD-ROM drives, printers to personal finance software, word processors to Web software, we present our 82 World Class winners.

97 Product of the Year: Netscape Navigator
98 On the Desktop
98 On the Road
99 The Printed Page
99 Most Promising Newcomers
100 In a Wired World
100 Motion and Sound
101 Storage
101 Service and Support
101 Loser of the Year
102 Applications
102 Working Together
106 The Basic Tools
106 Getting Organized
106 Mail Order

Special Report: Small Office/Home Office

221 Essential Tips for Running a Home Office
On your own with no assistant? Here's how to make your office run like clockwork, with tips on phone services, billing, automation, and more.

231 Hot Picks for the Home Office
These are a few of our favorite things: a keyboard with built-in speakers, a business card reader, and free software to track your FedEx shipments.

Cover photography by DPI

Internet Service Providers

113 No-Nonsense Guide to Internet Providers
Internet access options are more confusing than ever. Should you go with a national Internet service provider, a small local outfit, or an online service? Should you get an ISDN or modem connection? Full Web access or a shell account? Here's how to find the right service at the best price.

Windows 95 Databases

130 Databases Step Up to Windows 95
Can you finally create database apps without relying on a programmer? We put Windows 95 versions of Access, Approach, FileMaker Pro, and Paradox through rigorous usability tests and found an end-user database worthy of your upgrade dollar.

Workgroup Printers

148 All-Star Lasers
We ran the newest printers from HP, Lexmark, Tektronix, and other leading vendors through the wringer to find the best buys for your department or company. *PC World*'s latest Top 10 Workgroup Printers and new Top 3 Network Printers present the winning lineup with the right combination of speed, print quality, and price.

Top of the News

44 Pentium-200s: Faster by a Hair
The first P-200s show minor speed gains, but vendors could tempt buyers with prices only $150 to $200 more than P-166s.

48 RAM Scam!
Imagine mailing a check to buy RAM—and getting nothing in return. *PC World* exposes mail-order firms that walk the line between bad management and fraud.

55 NT 4.0 Moves Closer to Mainstream
NT retains power, adds Win 95 interface.

55 Web Browser
White- and yellow-page phone listings.

56 Bug Watch
Win 95 memory leak, Symantec bugs.

VOLUME 14
NUMBER 7

p. 130

Top 20 PCs

170 Pentiums Meet Their Match
This month, Cyrix 6x86 systems with Pentium-class performance challenge best buy Intel-based PCs, with all price tags set to plummet as the CPU wars heat up. This month's chart-toppers: the Dell Dimension XPS P133c and P100t, the Gateway Solo S5-120XL, and the Toshiba Satellite 100CS.

Top 10 Hardware

211 Top 10 17-Inch Monitors
Debuting Iiyama VisionMaster Pro 17 takes top spot.

215 Top 10 Graphics Boards
Diamond board with built-in TV tuner cracks Top 10.

217 Top 10 Modems
Megahertz XJ4288 debuts at number 4.

Reliability & Service Monitor

209 Win a Vektron Multimedia P-100 PC
How satisfied are you with your PC? Fax in this survey for a chance to win a Vektron Multimedia P-100, a Best Buy PC from this month's Top 20 charts.

p. 148

Here's How

238 Help Line
244 Spreadsheets
248 Word Processing
254 Windows
262 Data Management
264 Online
268 Hardware

Departments

21 In This Issue
25 Letters
33 Real Problems, Real Solutions
39 Full Disclosure

Resources

14 How to Contact PC World
258 Coming Up
273 PC World Catalog
285 Mail-Order Shopping Guide
303 Reader Service Card
305 Advertiser Index
307 Editorial Product Index

New Products

67 IBM ThinkPad 560
68 QuickVideo Capture Board
68 Canon MultiPass C2500, 800 multifunction devices
70 Teac Tape800, Tape1600 backup drives
70 Graphics Blaster MA202, MA302 graphics cards
74 8Plex eight-speed CD-ROM drive
74 Power Storage Hard Drive Upgrade Kit
76 Internet Explorer 3, Netscape Navigator 3.0
78 Wall Street Analyst
78 MacOpener 2.0 utility
80 Internet Assistants file converters
80 CD-ROM Express, d-Time95 utilities
84 Travelocity travel site
84 Managing Across Difference training CD-ROM
86 DocuMagix HotPage Web browser utility
86 Wildfire Version 1.3 communications service
88 Megahertz AllPoints Wireless Modem
88 Whozz Calling 4 phone tracking package

PC World @Home

310 Consumer Watch
Don't get taken by PC mail-order scam artists.

311 Feedback
The buzz on companies, trends, and services.

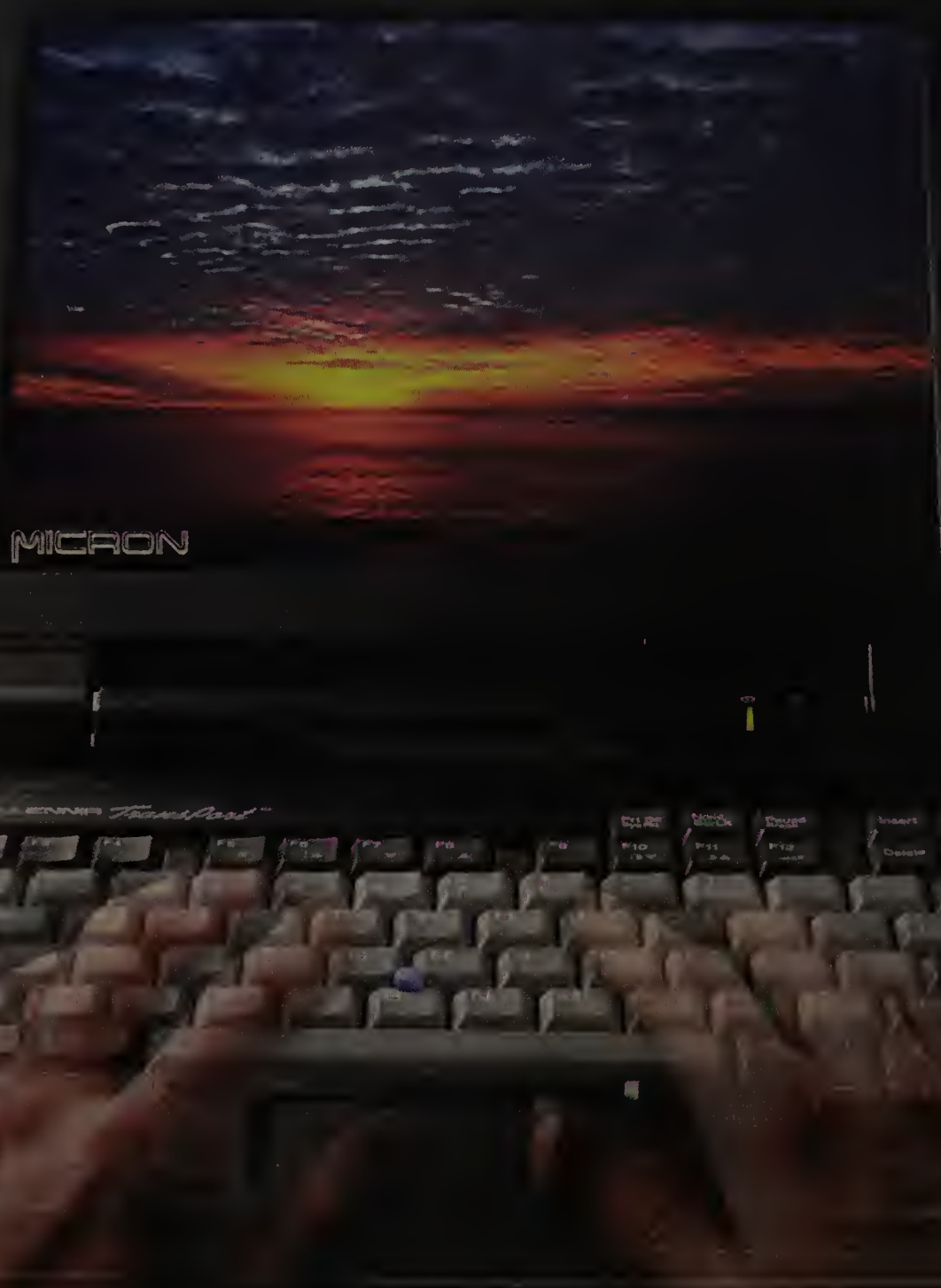
312 HouseWare
CD-ROMs and cybertoys for the whole family.

316 Top 5 Home PCs
Home PC price wars: Dell tops the chart.

320 Home Office
Does Steve Bass need a backup for his backup?

PC WORLD online Access PC World Online via America Online, CompuServe, Microsoft Network, Prodigy, or the World Wide Web (http://www.pcworld.com).

Now there are Two Machines Engineered to Rule the Road...



THE MILLENNIA TRANSPORT™ IS ONE OF THEM.

Powerful desktop computing, built for the road.

The Micron Millennia TransPort gives you the right combination of performance, standard features and options to match the best of desktop PCs. It's a no-compromise PC for the office or the road.

Flexible features, made for the way you work.

Micron's exclusive FlexOpt™ feature set includes two bays for your choice of seven notebook configurations. Drop in a modular quad speed CD ROM drive. Add a second intelligent modular lithium-ion battery, or 1.2GB hard drive to boost productivity. And count on intuitive features like Micron's innovative Pick-a-Point™ system that lets you choose either touchpad or pointing stick operation.

Engineered for performance.

A 133MHz mobile Intel Pentium® processor plus pipelined burst cache and EDO memory give you the power you need to take your show on the road at record speed.

Product protection that's second to none.

Micron is so confident in the design and construction of the Millennia TransPort that we offer an industry first—the Micron Power℠ warranty*. It includes a five-year limited warranty on the microprocessor and main memory and a three-year limited parts-only system warranty.

On the road to stardom. Just ask the experts.

Outstanding feature set:

"Replace your desktop PC and your notebook with the Millennia TransPort? It just might be an even trade."
—*Windows Sources*, April 1996

"By all accounts . . . a dead-ringer for IBM's ThinkPad . . . but performs better and saves you about $2,500."
—*PC Magazine*, April 9, 1996

Breakthrough performance:

"If you have a 75, 90 or 100MHz Pentium PC on your desk, it will fairly crawl compared to Micron's Millennia TransPort."
—*PC World*, March 1996

"The Millennia TransPort, a bench-burner of a notebook . . . delivered the highest Winstone 96 score we've ever seen on a notebook: 53.3". —*Windows Sources*, April 1996

intel inside pentium processor

Designed for Microsoft® Windows®95

SERVICE & RELIABILITY · PC MAGAZINE · READERS' CHOICE
July 1994

Windows Sources Stellar
APRIL 1996

800-245-3709
http://www.mei.micron.com

MICRON ELECTRONICS, INC.

Circle 149 on reader service card

Spec it Out

133MHz Intel Mobile Pentium® Processor combined with 256KB of pipelined burst cache and 16MB of EDO memory provide the high level of performance you've come to expect from Micron.

11.3" Active Matrix Display shows you the big picture in vivid 800 x 600 color.

PCI Graphics Accelerator provides blazing graphic performance with VGA, S-Video, and NTSC video outputs.

Dual Infrared Ports provide convenient IRDA-compliant wireless connection in front or in back.

SoundBlaster™ 16 Sound delivers 16-bit stereo sound to two integrated stereo speakers for the complete multimedia experience.

Two PCMCIA Slots hold either two Type II or one Type III device. Handles a wide variety of communications and storage options.

Removable 1.2GB Drive gives you vast amounts of storage and allows you to upgrade to a larger hard drive in the future.

4X Modular CD-ROM provides fast access to a whole new world of information.

Lithium-ion Battery Intelligent modular lithium-ion batteries give you the power to complete the job. Add a second modular battery in bay two and double your productivity.

Dual Pointing Devices The Pick-a-Point™ offers two pointing devices; choose either the touchpad or the pointing stick.

Modular Bay #2:

Intelligent lithium-ion battery

or

4X CD-ROM drive

or

2nd 1.2GB hard drive

or

3.5" floppy drive

Modular Bay #1:

Intelligent lithium-ion battery

or

3.5" floppy drive

TRAVEL IN STYLE

"An excellent entry into the mobile Pentium fray, Micron's Millennia TransPort offers a solid blend of features, performance and design."
—*Windows Sources*, April 1996

Millennia TransPort P133

Standard Features

- 133MHz Mobile Intel Pentium® processor
- Intel 430MX PCIset
- 256KB L2 pipelined burst cache
- 4X modular CD-ROM drive
- 11.3" 800 x 600 color display
- PCI graphics accelerator, 1MB RAM
- Pick-a-Point™ dual pointing devices integrate both pointing stick and touchpad
- Removable EIDE hard drive (1.2GB max.)
- 3.5" modular floppy drive
- Intelligent modular lithium-ion battery
- SoundBlaster™ 16-bit stereo sound
- Built-in stereo speakers and microphone
- 2 Type II or one Type III PCMCIA slots
- S-Video and NTSC video-outputs
- Headphone, microphone and line-in jacks
- 2 infrared ports: one front, one back
- Parallel, serial, VGA and 2 PS/2 ports
- Dimensions: 11.7" x 9.4" x 2.0", Weight: 6.9 lbs.†
- Nylon carrying case
- Microsoft® Windows® 95 CD & MS Plus! CD
- Microsoft Office Pro 95 and Bookshelf 95 CDs
- 5-year/3-year Micron Power℠ warranty*

A
- 16MB EDO memory (48MB max.)
- 1.2GB removable hard drive
- 11.3" active matrix color display

$4,699 Business lease $160/month

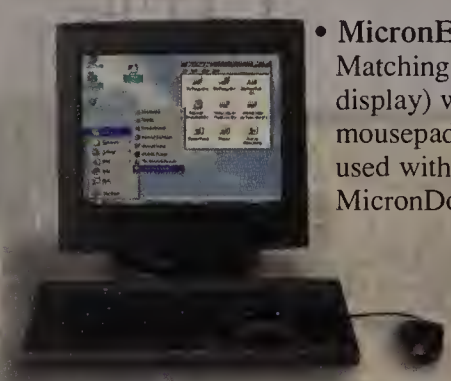
B
- 32MB EDO memory (48MB max.)
- 1.2GB removable hard drive
- 11.3" active matrix color display
- 2nd intelligent modular lithium-ion battery
- Motorola® Montana 28.8 fax/modem

$5,799 Business lease $182/month

†6.9 lbs. includes 3.5" floppy and one battery.

Options

- **MicronDock™ multimedia port replicator:** Ethernet LAN adapter, SCSI-2 port, S-Video and NTSC video outputs, built-in stereo speakers, infrared port, headphone, microphone, line-in jacks, parallel, serial, VGA and 2 PS/2 ports.....$299



- **MicronExec™ desktop package:** Matching black 17" monitor (15.8" display) with matching black mouse, mousepad and keyboard (can be used with or without MicronDock).....$799

- Motorola Montana 28.8 fax/modem supports regular telephone connections, cellular phones and two-way paging devices.....$299
- 2nd intelligent modular lithium-ion battery.....$199
- 2nd 1.2GB modular hard drive (2.4GB total).....$599
- 16MB EDO memory upgrade.....$699
- 32MB EDO memory upgrade.....$1,399
- Leather carrying case upgrade.....$59

"Micron Power" Warranty & Support

- 5-year limited warranty on microprocessor and main memory
- 3-year limited parts-only system warranty
- 1-, 2- or 3-year optional on-site service agreement for all desktop systems
- 30 days of free Micron-supplied software support
- 30-day money-back policy
- 24-hour technical support

All sales are subject to Micron's standard limited warranties and terms and conditions of sale. Copies of the limited warranties may be obtained by calling Micron or at http://www.mei.micron.com.

intel inside pentium PROCESSOR

800-245-3709

http://www.mei.micron.com

MICRON ELECTRONICS, INC.

900 E. Karcher Road, Nampa, ID 83687
Mon-Fri 6am-10pm Sat 7am-5pm (MT) • 24-hour technical support
208-893-3434 • Fax 208-893-3424 • Purchase Order Fax 208-893-8992

© 1996 Micron Electronics, Inc. All rights reserved. All prices and specifications subject to change without notice. Micron Electronics, Inc. is not responsible for omissions and/or errors in typography or photography. Micron Power is a service mark; Millennia TransPort, Pick-a-Point, MicronDock, MicronExec and FlexOpt are trademarks of Micron Electronics Inc. Intel, Intel Inside and Pentium are registered trademarks of the Intel Corporation. Microsoft is a registered trademark and Windows 95 and the Windows logos are trademarks of Microsoft Corporation. All other company trademarks are trade names of each respective company. Prices do not include shipping and handling. 30-day money-back policy does not include return freight and original shipping/handling charges, applies only to Micron brand products and begins from date of shipment. All returns require RMA numbers and must be shipped in the original condition prepaid and insured. Lease prices based on 36-month lease. TRNS-PCWD-9607

Circle 149 on reader service card

on the information highway, all roads to lead PC WORLD ONLINE

Join the information hounds who are connecting to the world's most popular personal computing authority. PC World Online is *the* place to get connected:

Web: http://www.pcworld.com

America Online: keyword pcworld

CompuServe: go pcworld

Prodigy: jump pcworld

MSN: go to pcworld

Call 1.800.PCWOL.95 and get connected.

PC WORLD online

get a line on the world

©1996 PC World Communications, Inc. All rights reserved. All other brand names and products are trademarks or registered trademarks of their respective holders.

PC WORLD

EDITOR IN CHIEF Philip Lemmons

EDITOR Cathryn Baskin

EXECUTIVE EDITORS Eric Bender, Tracey Capen, Steve Fox, Andy Reinhardt

MANAGING EDITOR Luis Camus

ART DIRECTOR Robert Kanes

SENIOR ONLINE EDITOR Dan Miller

SENIOR REVIEWS EDITOR Carla Thornton

SENIOR TECHNICAL EDITOR Karl Koessel

EAST COAST EDITOR Randy Ross

SENIOR WRITER Roberta Furger

EDITORIAL

Assistant Managing Editor Anne Kandra

Senior Associate Editors Rex Farrance, Bryan Hastings, Ann Kremers, Michael S. Lasky, Yael Li-Ron, Harry McCracken, Gabrielle Mitchell, Lincoln Spector, Christina Wood

Associate Editors Brad Grimes, Catherine Kenny, Melissa Riofrio, Carol White

Technical Editor Shane Rau

Staff Editors John Goddard, Laurianne McLaughlin

Online Staff Editors Richard Overton, Samantha Parent

Assistant Editors Eric Hellweg, Aoife M. McEvoy

Editorial Researcher Angela Freeman

Editorial Assistant Allyson Bates

Copy Chief Richard Johnson

Senior Copy Editors Barbara Lewis, Marla Miyashiro

Copy Editors Stephen Compton, Kim Saccio, Hon Walker

Editorial Production Associate Henry Pham

Assistant to the Editor in Chief Linda L. Grubbs

Administrative Assistants Stephanie Daigre, Heidi Zinsmeister Wolff

Business Manager Heidi Anderson

Librarian Stella Chan

ART & DESIGN

Associate Art Director Greg Silva

Assistant Art Director Tim J Luddy

Senior Designers Barbara Adamson, Laura Guerin, Carolyn Perot

Senior Designer, Infographics Sandra Kelch

Assistant Designer, Infographics Robin Manning

Production Artist Marlene Tobias

CONTRIBUTING EDITORS

Steve Bass, George Campbell, Scott Dunn, Bronwyn Fryer, Judy Heim, Eric Knorr, Stephen Manes, James A. Martin, Celeste Robinson, Richard Scoville, Scott Spanbauer, Kirk Steers

PC WORLD TEST CENTER

Test Center Director Julian Milenbach

Manager, Performance Testing Ulrike Diehlmann

Manager, Usability Testing Susan Silvius

Performance Analysts Dave Casini, Jeffrey D. Kuta, Kevin Mitchell, Mike Salayko

Test Center Coordinators Andrew Hawn, Julian Weatherby

NETWORK WORLD–PC WORLD NETWORK TEST CENTER

Director William L. Rinko-Gay

USER GROUP ADVISORY BOARD

Steve Bass, Pasadena IBM Users Group; Roger Bender, Microcomputer Managers Association; Jack Bolton, Atlanta PC User's Group (APCUG); Brian Camenker, Boston Computer Society; Rollie Cole, APCUG; Paul Curtis, APCUG; Mary Dolce, Chicago Computer Society; Sandy Frunzi, Las Vegas PC User Group; Al Harrison, Houston Area League PC Users; David Hoffman, NYPC; Joseph Rigo, NYPC; Robert Rodrigue, MicroLink PC User Group

Founder David Bunnell

Founding Editor Andrew Fluegelman

PC WORLD ONLINE SERVICES GROUP

Publisher Thomas Gewecke

Director, Business Development Sara Frankel

Director, Marketing Scott Danish

Director, Operations Nancy H. Miller

Director, Interactive Services Dennis Sheridan

Manager, Product Development Adam Block

Manager, Online Design Jonas Höglund

Business Analyst Susan Fry

Online Producers Carla Lieberman, Licia Slimon

Content Development Specialist Declan Fox

Content Engineer Nick Van Cleve

Production Coordinator Paul O'Neil

Producers, Product Development Spencer Ante, Greg Weinger

Assistant to the Publisher and Special Products Manager Martyne Page

PC WORLD COMMUNICATIONS, INC.

Chief Executive Officer Patrick Kenealy

President and Chief Operating Officer Richard J. Marino

Publisher J. Samuel Huey

VP and Associate Publisher Jeff Edman

VP and Chief Financial Officer Vicki Peilen

VP, Circulation Shawne Pecar

VP, Human Resources Richard Willoughby

VP, Manufacturing Linda Manes Goodwin

VP, Research Cheryl Brink

Mazellan. We made the name hard to remember. Because the monitor is unforgettable.

For over 30 years the Hansol name has been synonymous with quality and innovation throughout Asia. So, when we set out to design a true state-of-the-art 17" monitor (15.7" viewable), our engineers gave little thought to the name - they called it the 17PX. But when we saw it, we thought of the different worlds it can take you to, and the name Mazellan just came to mind. From its cleanly designed lines to its radically different breathing vent holes, it's simply a pleasure to look at. And that's when it's off. But when it's on you'll really see its true beauty come out.

Fully compatible with both PC and Mac, its 0.26mm dot pitch black matrix CRT with anti-static and AR coating make it one of the brightest displays available today, while its ultra-high resolution 1600x1200 screen delivers images that seem to come alive.

So while the name Mazellan may be a little hard to remember, once you've seen what it can do, you'll never forget it.

Hansol
Ideas that Shine

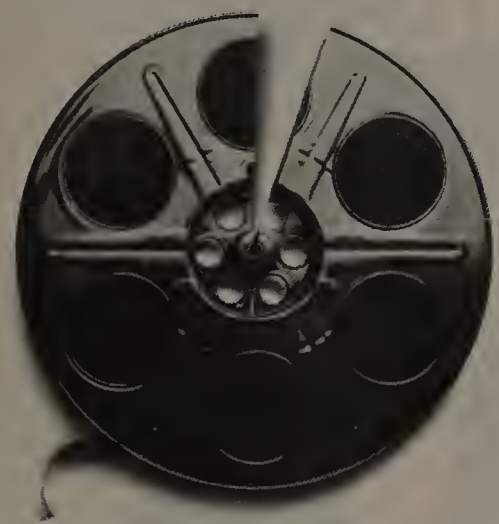
MPR II · PLUG & PLAY · OSD · NUTEK

For further information, call toll free 1-888-HANSOL1(1-888-426-7651).
Hansol Multitech, Inc., 6 Centerpointe Dr., Suite 220, La Palma, CA 90623

©1996 Hansol Multitech, Inc. All trademarks and registered trademarks belong to their respective owners.

Circle 102 on reader service card

Just a fraction of the time we spend on the phone can help answer society's problems.



Just a fraction of our time watching movies could help bring many happy endings.

Just a fraction of what we spend dining out can help pick up the tab for a worthy cause.

It takes so little to help so much.

Millions of people have helped establish five percent of their incomes and five hours of volunteer time per week as America's standard of giving.

Get involved with the causes you care about and give five.

Give Five.

What you get back is immeasurable.

PC WORLD

HOW TO CONTACT PC WORLD

SUBSCRIPTION SERVICES, ADDRESS CHANGES

Call 800/234-3498 (303/604-1465 in Colorado and Canada) or write Subscriber Services, P.O. Box 55029, Boulder, CO 80322-5029. To place new orders, call 800/825-7595. Contact *PC World* customer service on the Internet at customer_service@pcworld.com.

MAIL

PC World Editorial, 501 Second St. #600, San Francisco, CA 94107
Phone: 415/243-0500 **Fax:** 415/442-1891
America Online: keyword pc world
CompuServe: go pcworld
Microsoft Network: go pcworld
Prodigy: jump pc world
World Wide Web: http://www.pcworld.com
Internet: letters@pcworld.com; for subscription questions, customer_service@pcworld.com

PC WORLD ONLINE

You can contact the editors and staff on PC World Online via America Online (keyword pc world), CompuServe (go pcworld), Microsoft Network (go pcworld), Prodigy (jump pc world), and the World Wide Web (http://www.pcworld.com). PC World Online offers valuable features only electronic media can provide: the latest PC industry news and information; quick content searching; real-time interaction and feedback; links to software, demos, and other electronic resources; online-exclusive editorial features; and message boards. To obtain a free starter kit for America Online, CompuServe, or Prodigy, call 800/729-6595.

LETTERS TO THE EDITOR

Send letters electronically to the Message Board on PC World Online; Internet, letters@pcworld.com; MCI Mail, 666-2936 or pcwletters; or mail them to *Letters* at *PC World*. Include your name, city, and state. We reserve the right to edit letters.

REAL PROBLEMS, REAL SOLUTIONS

Send article ideas—including a brief outline of your company, job, problem, and solution as well as your name, address, and phone number—electronically to the Real Problems, Real Solutions forum on PC World Online; CompuServe, 72614,1534; 408/338-0945 (fax); mail them to *Real Problems, Real Solutions* at *PC World;* or call us at 415/978-3212. *PC World* pays $300 per published column.

FULL DISCLOSURE

Send letters electronically to PC World Online; Internet, smanes@ix.netcom.com; or mail them to *Full Disclosure* at *PC World*.

@HOME

Send letters electronically to the appropriate forum on PC World Online (for example, send *Consumer Watch* questions to the Consumer Watch forum); Internet, home@pcworld.com; or mail them to *PC World*. Send consumer-related questions and complaints to *Consumer Watch* at *PC World*. You can contact our *Home Office* editor at steve_bass@pcworld.com.

HERE'S HOW QUESTIONS AND SUBMISSIONS

PC World pays $50 for published *Here's How* tips and questions. Keep submissions brief; accepted submissions will be acknowledged by payment. Send questions electronically to the appropriate forum on PC World Online (for example, send *Help Line* questions to the Help Line forum) or to the online address below, or mail them to *PC World*.

Contact editors at the addresses below. Please note that editors cannot guarantee personal responses to questions that are not posted to *PC World*'s online forums.

Help Line: CompuServe, 74055,412; MCI Mail, 179-3813; Internet, scott_spanbauer@pcworld.com
Spreadsheets: CompuServe, 72341,2727; MCI Mail, 357-4517; Internet, richard_scoville@pcworld.com
Word Processing: CompuServe, 71571,222; MCI Mail, gcampbell; Internet, george_campbell@pcworld.com
Windows: America Online, pcwsdunn; CompuServe, 74055,412; Internet, pcwsdunn@aol.com
Data Management: CompuServe, 74055,412; Internet, celeste_robinson@pcworld.com
Online: CompuServe, 75300,713; Internet, judy_heim@pcworld.com
Hardware: MCI Mail, 459-7102; Internet, eric_knorr@pcworld.com

NEW PRODUCT ANNOUNCEMENTS

Address hardware and software press releases to *New Products* at *PC World*, or call 415/978-3212.

REPRINTS AND PERMISSIONS

You must have permission before reproducing any material from *PC World*. To quote from or reprint any portion of any article, or to use artwork or photographs from the magazine, write to *PC World*, Reprints and Permissions, 501 Second St. #600, San Francisco, CA 94107; include a phone number. To order reprints of your company's editorial coverage in *PC World*, call 612/582-3810.

BACK ISSUES

PC World is available on microfilm and microfiche from UMI, 300 N. Zeeb Rd., Ann Arbor, MI 48106-1346; 800/521-0600. Issues and article copies are also available from UMI.

MAILING LISTS

Occasionally we make our subscribers' names available to other companies whose products may interest you. Many subscribers find this a valuable service. If you want your name excluded from these mailings, send your mailing label with a request to remove your name from our promotional file to Subscriber Services, P.O. Box 55029, Boulder, CO 80322.

PENTIUM® PRO TECHNOLOGY

STARTING AT

$2195

FASTER than a bolt of lightning, more powerful than a burst of thunder, ALR's EVOLUTION 6 series is taking the business world by storm. Featuring the power of Pentium® Pro technology with speeds of up to 200-MHz, these two new systems are going to improve the forecast for your business. Looking for the ultimate in Pentium Pro technology? The **ALR EVOLUTION DUAL6** is one of the industry's first PCs to offer an immediate upgrade path to dual Pentium Pro technology. In other words, you can get the power of a high-performance RISC-based workstation for thousands of dollars less. Its the power you need to take advantage of 32-bit operating systems such as Windows® NT, SCO® UNIX, and Novell® NetWare™ SMP. With room for up to 512-MB of RAM and over 16-GB of storage, the EVOLUTION DUAL6 has the performance and expandability you're looking for in a small business server. A suite of built-in Hardware Management Features prevents downtime by monitoring critical information such as CPU temperature, fan speed, and system voltage. Or just add a high performance PCI video card, and you've got the ultimate CAD, scientific or animation workstation.

ALR EVOLUTION DUAL6
150-or 200-MHz Pentium Pro Processor
Dual Pentium Pro Processor Ready
Mini Tower Model
16-MB ECC Memory
512-MB Max Memory
256-KB Integrated L2 Cache
PCI/ISA Bus Architecture
Six Total Storage Bays
Eight Total Expansion Slots
315 Watt Power Supply
5 Year/ 36 Month Warranty
First Year On-Site Service*

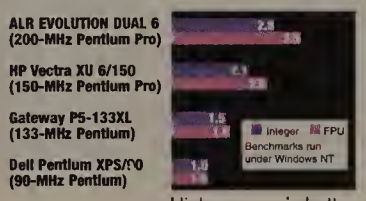
intel inside PENTIUM® PRO PROCESSOR

Trying to fit Pentium Pro technology into a tight budget? Then check out the **ALR EVOLUTION 6**. This value-packed PC offers a 150-MHz Pentium Pro chip and 16-MB of RAM for as little as $2195 MSRP. Yet even at this low price, it takes full advantage of the Pentium Pro chip's most advanced features, including Dynamic Execution.

ALR EVOLUTION 6
150-or 200-MHz Pentium Pro Processor
Mini Tower Model
16-MB Memory
128-MB Max Memory
256-KB Integrated L2 Cache
PCI/ISA Bus Architecture
Six Total Storage Bays
Six Total Expansion Slots
200 Watt Power Supply
5 Year/ 36 Month Warranty
First Year On-Site Service*

ALR EVOLUTION DUAL6

BYTEmark 32-bit CPU/FPU Benchmarks



Higher score is better.

5 YEAR 36 MONTH warranty

And no matter which system you choose, you'll receive the quality and reliability that you've come to expect from ALR's award-winning servers and workstations. Quality that's backed by ALR's 5 Year/36 Month Limited Warranty and industry leading service and support.

ALR EVOLUTION 6

To start *taking advantage of the electrifying performance of ALR's EVOLUTION 6 series, visit your local ALR reseller.* *Or call:* **1-800-444-4ALR** *(ref# 5306)*

ALR® Advanced Logic Research, Inc.

FIRST TO HARNESS THE POWER OF FOUR 200-MHz PENTIUM PRO PROCESSORS

ALR is on the Internet - http://www.alr.com *& CompuServe* **- GO ALRINC.** Advanced Logic Research, Inc. 9401 Jeronimo, Irvine, CA 92718 (714)581-6770 FAX. (714) 581-9240 * Requires one time registration fee of $9.95. Prices, configurations and specifications subject to change without notice. Systems shown with optional equipment. Pricing based on U.S. dollars. ALR is a registered trademark of Advanced Logic Research, Inc. Pentium Pro logo and Intel Inside logos are trademarks of Intel Corporation. All other brand and product names are trademarks or registered trademarks of their respective owners. © 1996 by ALR

Circle 9 on reader service card

THE NEW WINBOOK FX
MAXIMUM SPECS

16MB EDO RAM Standard – up to 40MB total
Super-fast EDO RAM on board and a second bank for expansion. User upgradable—upgrade without wasting RAM.

11.3" SUPER VGA Active Matrix Display
Extra large display with bright, vivid 800 x 600 color gives you a bigger picture

One Type III & One Type II PCMCIA Slot
32-bit PCI Local Bus PCMCIA controller to accommodate both type II and type III for a greater variety of options

intel inside pentium® PROCESSOR

100MHz to 133MHz Intel® Pentium® Chip
Plus 256K syncburst cache—incredible performance that rivals many desktop PCs.

Modular Bay
The greatest flexibility in mobile computing

- 4X CD-ROM
- *or*
- 8-cell Lithium Ion Battery (option)
- *or*
- 3.5" Floppy Disk Drive

Two-way Infrared Port
Adds the convenience of IRDA-compliant wireless connection.

Removable 810MB to 1.3GB HDD
You get greater data storage and upgradability for the future

12-cell Lithium Ion Battery
4 more cells than most notebooks plus 52 watts mean longer on-the-road computing with enough battery life to run your CD-ROM.

Dual Pointing Devices
Pick your pointing device: a standard dual-button pointing stick or optional touchpad (pictured)

16-bit Stereo Sound
SoundBlaster compatible sound for a complete multimedia experience

WinBook *FX*

1-800-468-1242

Monday-Friday, 8am-9pm EST • Saturday, 9am-4pm

Use your VISA, Discover Card, MasterCard, personal check or P.O. with credit approval. U.S. sales only. 30-day unconditional money-back guarantee from date of purchase.

WinBook®
COMPUTER CORPORATION
a subsidiary of Micro Electronics, Inc.

The new WinBook FX combines the maximum features in a high-quality, best value notebook, and continues the award-winning tradition of WinBook Computers.

- POWER-SAVING 100MHZ INTEL® PENTIUM® CHIP
- 16MB EDO RAM
- 810MB REMOVABLE HDD
- PLUS STANDARD FEATURES

$3599

- POWER-SAVING 133MHZ INTEL® PENTIUM® CHIP
- 16MB EDO RAM
- 1.3GB REMOVABLE HDD
- PLUS STANDARD FEATURES

$3999

WINBOOK FX STANDARD FEATURES

- POWER-SAVING INTEL® PENTIUM® NOTEBOOK CHIP
- 16MB EDO RAM
- 11.3" SUPER VGA ACTIVE MATRIX COLOR DISPLAY
- 3.5" 1.44MB DISKETTE DRIVE MODULE
- 4X CD-ROM MODULE
- 6.8 POUNDS (WITH FDD)
- 12-CELL 52W LITHIUM ION BATTERY
- 32-BIT LOCAL-BUS VIDEO
- 16-BIT SOUNDBLASTER COMPATIBLE STEREO SOUND
- 1MB VIDEO RAM
- 256K SYNCBURST CACHE
- ONE TYPE II AND ONE TYPE III PCMCIA SLOT
- INTEGRATED DUAL-BUTTON POINTING STICK, OPTIONAL TOUCHPAD
- PARALLEL, SERIAL, PS/2, INFRARED AND GAME PORT

ADD RAM IN 8MB INCREMENTS FOR ONLY $399 AT TIME OF NOTEBOOK PURCHASE

©1996 WinBook Computer Corporation. All rights reserved. WinBook is a registered trademark of Micro Electronics, Inc. The Intel Inside logo and Pentium are registered trademarks of the Intel Corporation All other trademarks and registered trademarks are property of their respective corporations.
All prices and specifications are subject to change without notice or obligation Prices do not include shipping.

100MHZ PENTIUM® CHIP, TFT, 16MB, LITHIUM, $2999.

PC Laptop Computers Magazine
EDITORS' CHOICE AWARD
"Value Notebook of the Year"
— January 1996 Issue

Windows Magazine
HIGHEST RATING: 5 out of 5 Ws
"...the best design of any notebook..."
— March 1996 Issue
W W W W W

PC World Magazine
BEST BUY AWARD: POWER SYSTEMS
"As fast as a notebook goes"
— April 1996 Issue

Laptop Buyer's Guide
BEST BUY AWARD
"It's fast,... smart... and versatile"
— May 1996 Issue

WinBook XP5

$1799
WINBOOK XP5 75MHz
- 75MHz INTEL PENTIUM® PROCESSOR — POWER-SAVING NOTEBOOK CHIP
- 8MB RAM
- 540MB REMOVABLE HDD
- 256K L2 CACHE
- 10.3" DUAL-SCAN COLOR DISPLAY
- 3.5" 1.44MB DISKETTE DRIVE
- 6.1 POUNDS
- 32-BIT LOCAL-BUS VIDEO
- NIMH BATTERY W/ POWER MANAGEMENT
- 1MB VIDEO RAM
- TWO TYPE II OR ONE TYPE III PCMCIA SLOT
- INTEGRATED DUAL-BUTTON POINTING STICK, OPTIONAL DUAL-BUTTON TRACKBALL OR TOUCHPAD
- PARALLEL, SERIAL AND PS/2 PORTS

Double your RAM to 16MB for only $399 at time of notebook purchase!

$2999
WINBOOK XP5 100MHz
- 100MHz INTEL PENTIUM® PROCESSOR — POWER-SAVING NOTEBOOK CHIP
- 16MB RAM
- 810MB REMOVABLE HDD
- 256K L2 CACHE
- 14.4 SEND/RECEIVE FAX/VOICE/DATA MODEM
- 10.4" TFT ACTIVE MATRIX COLOR DISPLAY
- 3.5" 1.44MB DISKETTE DRIVE
- 6.1 POUNDS
- 32-BIT LOCAL-BUS VIDEO
- 40 WATT LITHIUM ION BATTERY W/ POWER MANAGEMENT
- 1MB VIDEO RAM
- TWO TYPE II OR ONE TYPE III PCMCIA SLOT
- INTEGRATED DUAL-BUTTON POINTING STICK, OPTIONAL DUAL-BUTTON TRACKBALL OR TOUCHPAD
- PARALLEL, SERIAL AND PS/2 PORTS

Add stereo sound for only $79.95!

$3199
WINBOOK XP5 120MHz
- 120MHz INTEL PENTIUM® PROCESSOR — POWER-SAVING NOTEBOOK CHIP
- 16MB RAM
- 810MB REMOVABLE HDD
- 256K L2 CACHE
- 14.4 SEND/RECEIVE FAX/VOICE/DATA MODEM
- 10.4" TFT ACTIVE MATRIX COLOR DISPLAY
- 3.5" 1.44MB DISKETTE DRIVE
- 6.1 POUNDS
- 32-BIT LOCAL-BUS VIDEO
- 40 WATT LITHIUM ION BATTERY W/ POWER MANAGEMENT
- 1MB VIDEO RAM
- TWO TYPE II OR ONE TYPE III PCMCIA SLOT
- INTEGRATED DUAL-BUTTON POINTING STICK, OPTIONAL DUAL-BUTTON TRACKBALL OR TOUCHPAD
- PARALLEL, SERIAL AND PS/2 PORTS

$399
DOCKING STATION
w/4X CD-ROM, EXPANSION BAY AND SLOTS

intel inside pentium® PROCESSOR

A WinBook XP for every budget, starting at $1599!

$1599
WINBOOK XP 75MHz
- 75MHz INTEL® 486 PROCESSOR
- 8MB RAM
- 540MB REMOVABLE HDD
- 14.4 SEND/RECEIVE FAX/VOICE/DATA MODEM
- 10.3" DUAL-SCAN COLOR DISPLAY

$1999
WINBOOK XP 100MHz
- 100MHz INTEL® 486 PROCESSOR
- 16MB RAM
- 810MB REMOVABLE HDD
- 14.4 SEND/RECEIVE FAX/VOICE/DATA MODEM
- 10.3" DUAL-SCAN COLOR DISPLAY

PLUS MANY MORE QUALITY STANDARD WINBOOK XP FEATURES!

WinBook® COMPUTER CORPORATION
a subsidiary of Micro Electronics, Inc.

Circle 254 on reader service card

CALL US TODAY, TOLL-FREE
1-800-468-1242
Monday-Friday, 8am-9pm EST • Saturday, 9am-4pm
Use your VISA, Discover Card, MasterCard, personal check or P.O. with credit approval.
U.S. sales only 30-day unconditional money-back guarantee from date of purchase.

Options include your choice of integrated touchpad or trackball pointing devices, 3-year extended limited warranty, stereo sound, WinBook carrying cases, 28.8 Fax/Modem PCMCIA card and more!

©1996 WinBook Computer Corporation. All rights reserved. WinBook is a registered trademark of Micro Electronics, Inc. The Intel Inside logo and Pentium are registered trademarks of the Intel Corporation. All other trademarks and registered trademarks are property of their respective corporations. All prices and specifications are subject to change without notice or obligation. Prices do not include shipping.

The
world's
best color
ink jet printer.
Right here.
In black and
white.

And

magenta.

Cyan.

Violet

Red.

Yellow.

Orange

THE EPSON STYLUS PRO.

What makes it the world's best? Advantages like true 720 x 720 dpi for dazzling Photo Quality color printing on any media. Superior ink jet technology for a cleaner, more consistent dot pattern. Exclusive features like built-in Ethernet and the option to add Adobe® PostScript® Level 2 with PANTONE® CALIBRATED™ approved colors. For about $459. Best of all, the STYLUS PRO is easy to use. So now it's easy for all your documents to be seen in their best light. Not to mention color.

PLATFORM COMPATIBILITY:
PC, Mac & UNIX.
Automatic switching
across platforms.

STYLUS PRO

720 x 720 dpi on plain paper

NETWORK CONNECTIVITY:
ETHERNET & LOCALTALK

Now for about $459.00

CALL 1 800 GO EPSON
ASK FOR OPERATOR 3064

You make your document smart—our 720x720 dpi Photo Quality color will make it brilliant.

YOU'VE GOT TO SEE IT IN EPSON COLOR.™

Based on research conducted by MacWorld Magazine and Home Office Computing, independent ratings reports awarded the Epson Stylus Pro the highest rating in its class. Street price may vary. Epson and Epson Stylus are registered trademarks of Seiko Epson Corp. PANTONE and PANTONE CALIBRATED are trademarks of Pantone, Inc. Adobe and PostScript are registered trademarks of Adobe Systems, Inc. All other trademarks are the property of their respective owners. ©1996 Epson America, Inc. http://www.epson.com.

Ideas won't wait...

Capture your inspirations in a flash with Imagineer™

INTERGRAPH Imagineer™ Technical

Why spend time wrestling with your software? Intergraph Imagineer™ Technical makes drawing fast and easy. Instead of complex commands, you get intuitive on-screen feedback. Imagineer's new way of drawing reduces mouse clicks, command changes, and keystrokes – so you stay in tune with your creative impulses.

Designed for Windows® 95 and Windows NT™

Imagineer is a Microsoft® Office Compatible 95 product. Combine drawings with text files, spreadsheets, presentations, and more.

Imagineer works with AutoCAD and MicroStation® files *– no messy translation necessary!*

Call for a **FREE** evaluation CD! Visit our Web site at http://www.intergraph.com

Precision drawing made easy!

Only $495 – call and order today!

800-692-8069

Mention priority code R07.

Circle 106 on reader service card

Microsoft® OFFICE Compatible

Designed for Microsoft® Windows® 95

INTERGRAPH SOFTWARE SOLUTIONS

Intergraph and the Intergraph logo are registered trademarks and Imagineer is a trademark of Intergraph Corporation. Microsoft, Windows, and the Windows logos are registered trademarks and Windows NT is a trademark of Microsoft Corporation. MicroStation is a registered trademark of Bentley Systems, Inc. Other brands and product names are trademarks of their respective owners. Copyright 1996 Intergraph Corporation, Huntsville, AL 35894-0001. Printed in USA

1996 World Class Winners—and Losers

ERIK BUTLER

A few months ago, *PC World*'s editors were poring over early voting results for our 1996 World Class awards. With just a small percentage of votes tallied, it was still too early to tell which products would win. But one particularly interesting race was shaping up—Netscape Navigator facing off against Windows 95 for product of the year.

This month's cover story, "Best Products of 1996," reports the winners of this contest and all 82 of this year's World Class categories, from product of the year to best service and support. The results? For product of the year, Navigator pulled in 31 percent of the vote, versus 30 percent for Windows 95. For most promising software newcomer, Netscape's Web browser won again, this time with an 8 percent lead. For best Internet software, Navigator won a third time, with its closest competitor—Microsoft's Internet Explorer—barely putting up a fight.

Our congratulations to the upstart company, which started giving away its browser just 18 months ago. (International Data Group, the parent company of *PC World*, is a minority shareholder in Netscape Communications.) For Netscape, though, the battle has just begun. In this issue we preview the next versions of both Navigator and Internet Explorer (see "Internet Explorer versus Netscape Navigator, Round Three" in our *New Products* section). As you might expect, the new browsers will be roughly comparable in functions and features. Both, for instance, will add collaboration through whiteboard software. Both will beef up security, with Navigator including digital "certificates" for verifying personal identification. Both will add better programming support for building multimedia and interactive apps into Web pages. And both will continue to change rapidly. Before year's end, expect to see new versions of each that include, among other features, support for Internet directory services for locating people and e-mail addresses; this will become increasingly important as companies rely more on the Internet and intranets for day-to-day business.

Backhanded Compliment for Windows 95

Back on the desktop, Microsoft's Windows 95 walked away with the 1996 World Class award for best operating system. Microsoft's product also won this year's least-coveted award: loser of the year. It's not that voters didn't consider Windows 95 a significant step forward. It's more a case of its failure to live up to unrealistic expectations, as well as backlash against Microsoft's attempt to create a stampede mentality.

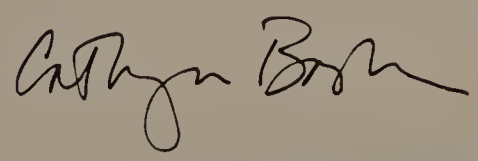
Another World Class category worth noting is most promising hardware newcomer. Here the vote was split, resulting in a tie among three products: Intel's Pentium Pro, its Pentium-166, and Iomega's Zip drive. Like Windows 95, the Pentium Pro failed to live up to expectations, choking on 16-bit Windows 3.1 software. Revisions to the Pentium Pro's chip set have improved performance, and the latest 200-MHz Pentium Pro systems do indeed outpace standard Pentium PCs when running mainstream software. But new systems with 200-MHz Pentiums or with Cyrix's 6x86/P166+ chips are edging close to Pentium Pro levels of performance at much more reasonable prices. (For test results of new PCs with these processors, see this month's lead news story, "Pentium-200: Winner by a Hair," and our Top 20 PC review, "Pentiums Meet Their Match.")

Too Good to Be True

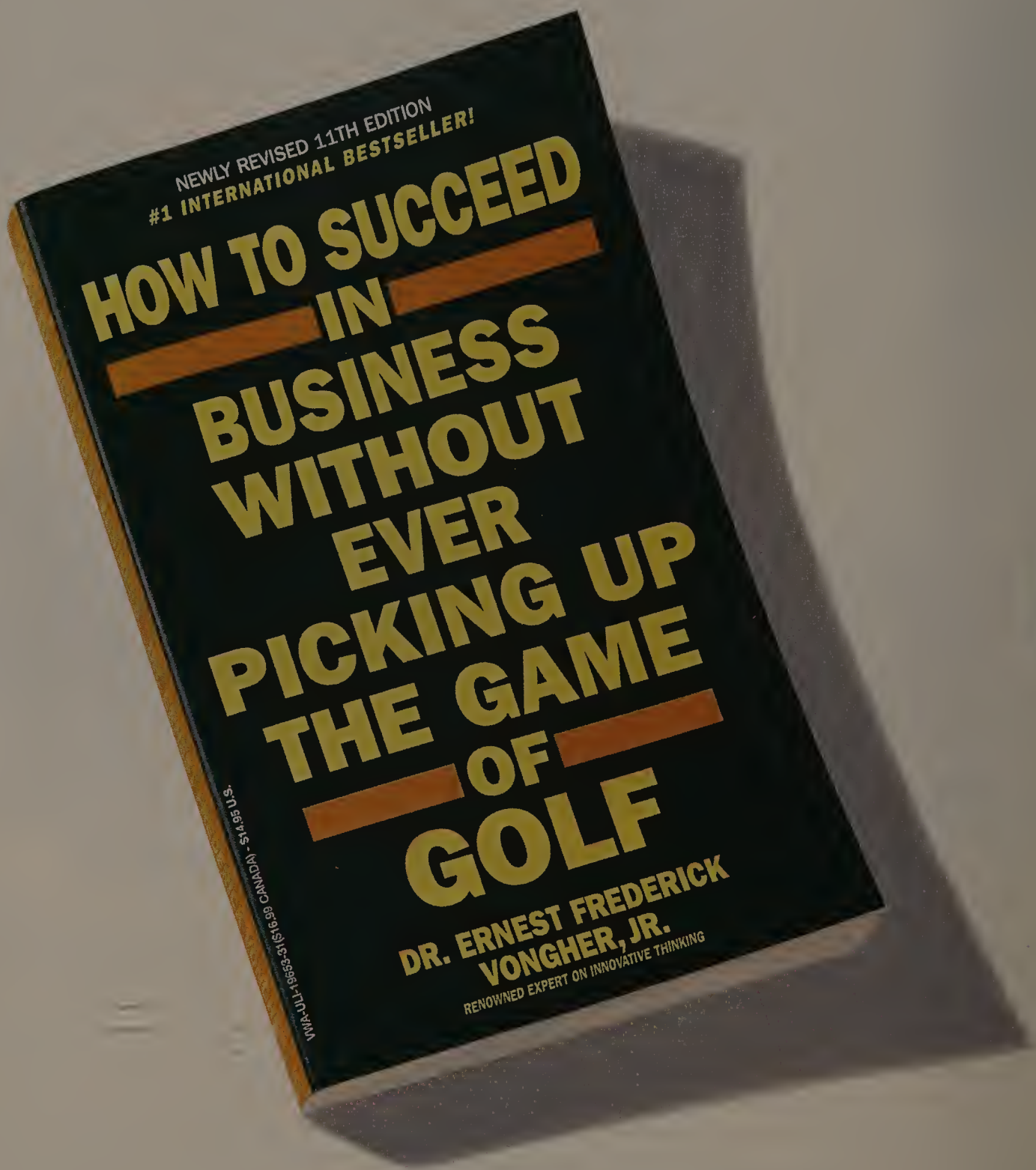
Competition like this is great news for consumers. But sometimes claims about performance and price are too good to be true. Two stories in this issue emphasize the need to exercise healthy caution, common sense, and your legal rights when buying PC products, especially by mail. First, *Consumer Watch* columnist Roberta Furger recounts problems reported by readers who bought PCs and other hardware from PC Distributor, a Florida mail-order company that took their money and ran. Furger outlines danger signs and recommends steps for protecting yourself and seeking redress if you end up the victim of a scam.

> **Competition like this is great news for consumers, but sometimes claims about price and performance are too good to be true.**

Finally, in this month's news story "RAM Scam!" writers Angela Freeman and Dan Tynan disclose the results of their investigation into a group of companies in Nevada and southern California that buy and sell memory and other PC products. All five companies named in the article have burned customers, suppliers, and banks, with losses amounting to more than $1 million. All five have eluded legal authorities so far. Buyers beware.



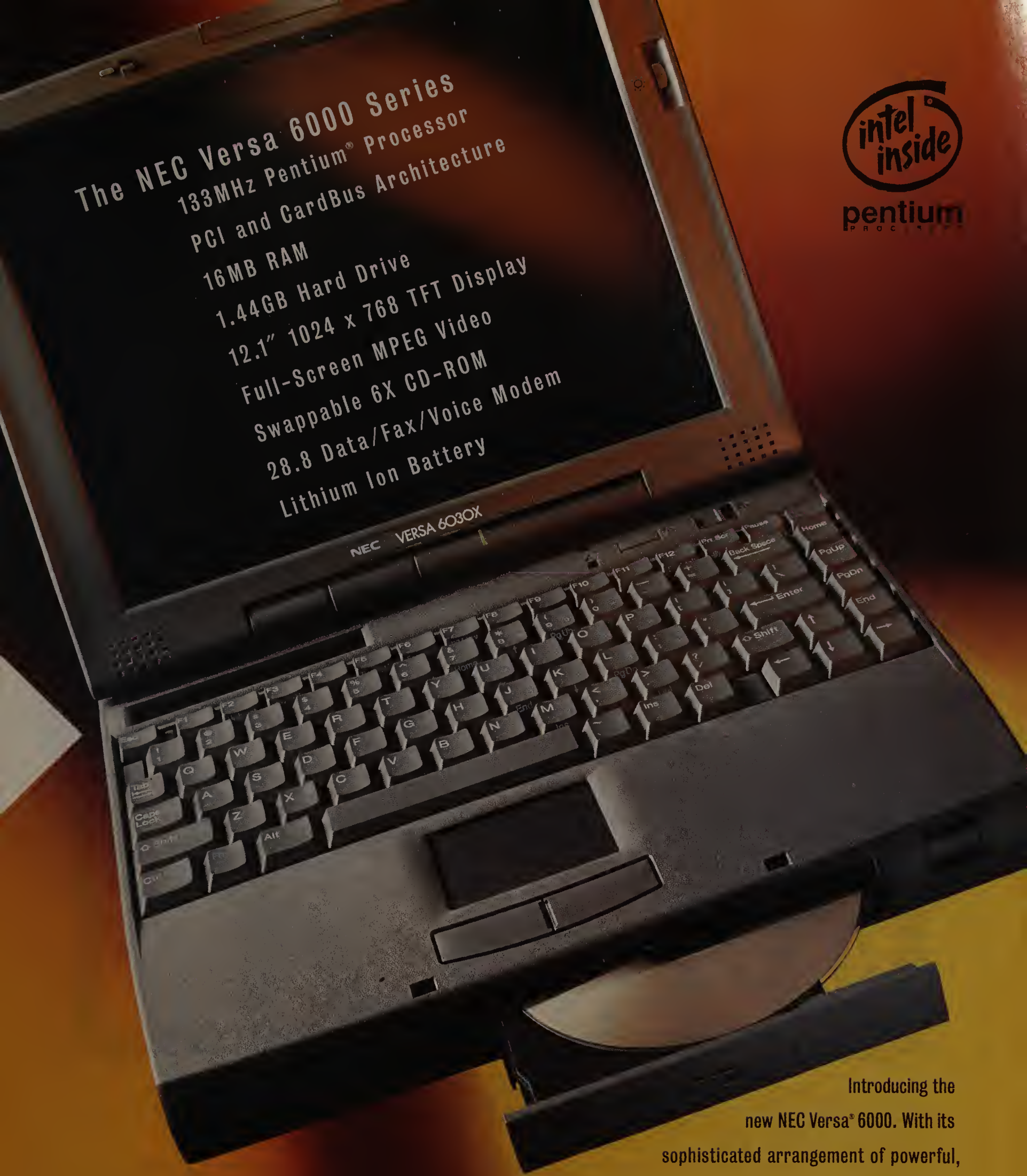
Cathryn Baskin, Editor



OR

Visit our new web site at http://www.nec.com

For more information call 1-800-NEC-VERSA. For info via fax call NEC FastFacts™ 1-800-366-0476. Versa is a registered trademark in the U.S. FastFacts, and See, Hear and Feel the Difference are trademarks of NEC Technologies, Inc. Pentium is a registered trademark of Intel Corporation. ©1996 NEC Technologies, Inc. **Key #11425**



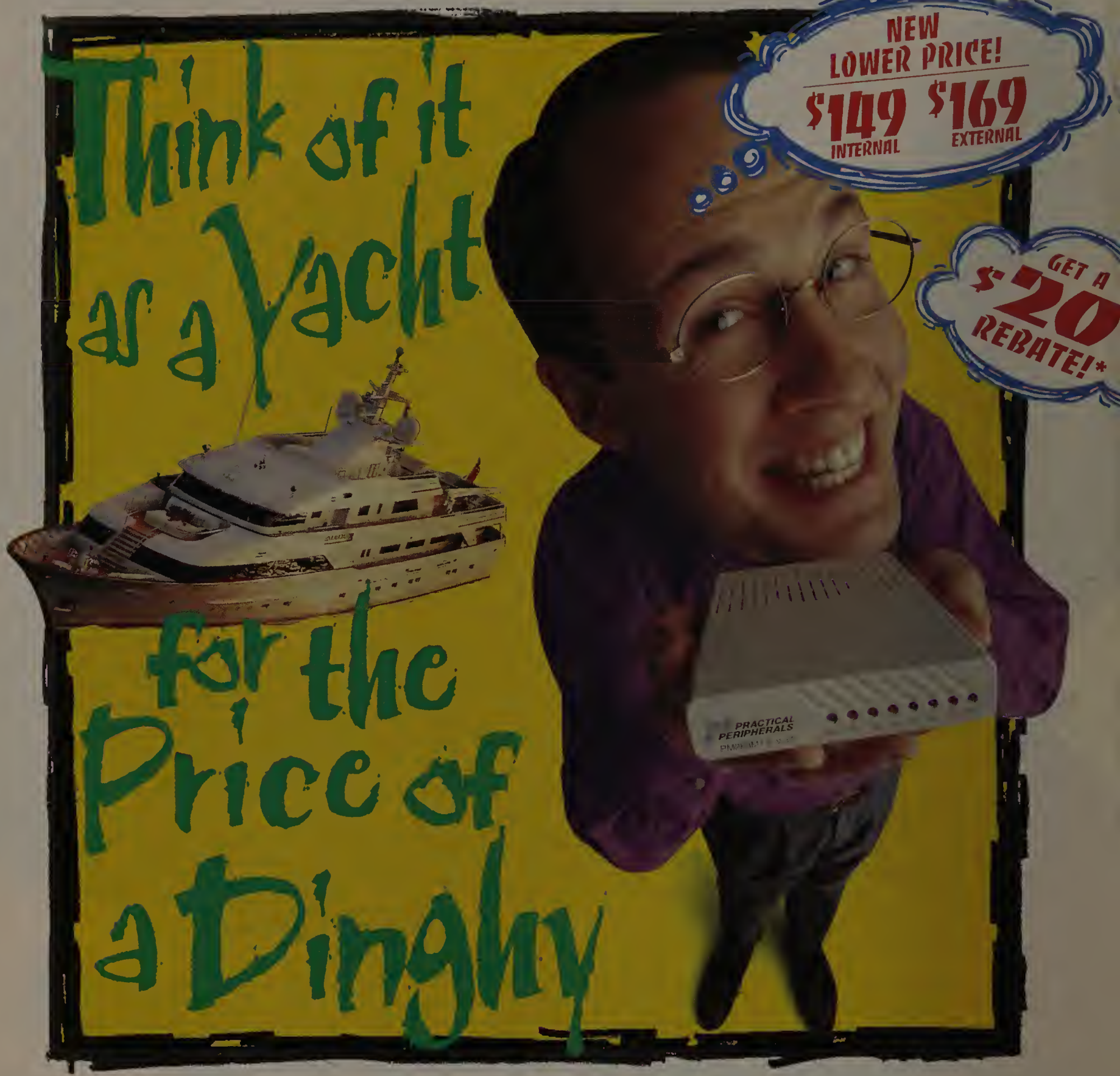
Introducing the new NEC Versa® 6000. With its sophisticated arrangement of powerful, state-of-the-art features, it'll allow you to get ahead by improving your productivity, not your handicap.

SEE, HEAR AND FEEL THE DIFFERENCE.™

NEC

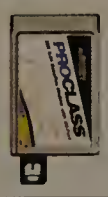
Circle 203 on reader service card

Isn't It Time You Bought The Value Priced Practical Class 288 Modem?



For an extremely low price, you can have high performance and easy installation from the modem *PC Magazine* called "most bang for the buck." The Practical Class 288 is a great modem for a small office, home office or for your own personal use. It features 28,800 bps transmission speeds and easy-to-use data/fax software to get you up and running on the Internet fast. The Practical Class 288 is backed by 7 day technical support and a lifetime limited warranty. What a value! For REBATE info, call 800-649-8018. For literature, use PRACTIFAX at 800-225-4774 and select document 3015.

PRACTICAL PERIPHERALS®



ProClass 288 EZ-Port™ Up to 230K bps throughput. EZ-Port pop-out telephone connector. Uses 90% less battery power than other modems. Compatible with all major PCMCIA notebook computers. Flash memory supports easy upgrades. 5 year limited warranty.

ProClass PC288LCD V.34 Exceptional performance and unique vertical design. Large LCD text display provides 50+ status messages. Easy to use menu buttons. Up to 230K bps throughput. Windows data and fax communications software. Lifetime limited warranty.

© 1996 Practical Peripherals. Phone: 770-840-9966. Fax: 770-734-4601. BBS: 770-734-4600. E-mail: support@practinet.com. Web Site: http://www.practinet.com. Practical, the Practical Peripherals logo, ProClass, and EZ-Port are trademarks of Practical Peripherals. *Applies to purchase made June 1 through August 31, 1996.

Circle 191 on reader service card

Gigabucks for Tech Support, the Best Stuff Online Is Free

How Not to Win a Customer

I want to thank Compaq Computer for making my next computer purchase decision a little easier. After reading the *Consumer Watch* column in the May issue ["The Death of Free Support"], there is no way that I would purchase from Compaq. No free support whatsoever? Give my credit card number the minute I call for help? Get a life. I could understand some changes in support, but this decision is stupid. Maybe Compaq should get out of the small office/home office and family PC business altogether—or maybe that's actually the plan?

Thanks again to Roberta Furger for a timely and useful report.

Kelly Mutch, La Grande, Oregon

Held Hostage by Tech Support Fees

I read "The Death of Free Support" with great interest, having just been held hostage by Compaq for their support fee. After I had run my hard disk defragging utility, my computer ceased to recognize my CD-ROM drive. The supplied manual was useless, suggesting things like "check to be sure CD is not upside down." All the diagnostic programs I tried said the system was fine. So I had no choice but to call Compaq. After waiting 20 minutes, I felt used as I handed over my credit card number. Even though the technician was able to resolve the problem in less than a minute, I will never buy another Compaq machine.

Donna Wright, Pittsburgh

Pinching Pennies on the Internet

I really enjoyed the May issue of *PC World*. I've subscribed to the magazine for three or four years, and this issue is probably the most helpful of all. Of particular interest was "The Best Free Stuff Online." (OK, maybe I'm being cheap.) I'm a home PC user with a limited budget, so this issue will stay on my bookshelf for a long time. Thanks; I've already told my friends how helpful the article is.

Bryan Reeves, Eureka, Illinois

Finding the Best Free Software

I read your article "The Best Free Stuff Online" and was particularly interested in the software. I quickly discovered that the sites you listed are World Wide Web pages. While Web pages are popular, they are often slow and inefficient. It is easier to get files from the Internet via FTP [file transfer protocol], and you won't have to deal with the graphics-intensive Web.

I also note that of the five sites you listed, three are for Windows only. This leaves your OS/2 users out of the pocket. The site http://www.teamos2.org has a lot of decent links to several OS/2 Web pages with software. If you want FTP, as I and many others do, go to ftp–os2.nmsu.edu.

Christian McArthur, College Station, Texas

No More QEMM Freeze-Ups

Thank you! I recently installed Windows 95 and experienced several freeze-ups while using Quarterdeck's QEMM 8.0. I read in the May *Bug Watch* column that a QEMM 8.01 patch would correct the problem. The patch works great, and I'm back in business. Thanks again for the great tip and for a great magazine.

James E. Hennon, America Online

The Politics of Election Coverage

Congratulations on having more complete presidential election coverage in your May issue ["Election '96, Internet Style"] than our local newspapers have had all year. None of our area's papers or TV stations even mention the Libertarian party, despite polls that show overwhelming support for Libertarian principles. I don't know whether this reflects very well on *PC World* or very badly on our local Virginia news media, but in any case you have my thanks and respect for taking your journalistic responsibilities seriously.

Brandon Blackmoor, Portsmouth, Virginia

PC WORLD

@HOME

EDITED BY CHRISTINA WOOD

Consumer Watch

The Death of Free Support

BY ROBERTA FURGER

Listen carefully next time you're on hold for technical support. You may hear "Taps" playing.

After more than a year of grumbling about the high costs of providing technical support to home PC users, Compaq Computer has decided to quit giving it away. With the introduction of its new line (the Presario series 5200, 7200, 7600, 9200, and 9600), the Houston, Texas, company began charging customers for answers to *all* questions that aren't the direct result of a product defect.

That means unless Compaq determines your problem stems from either broken hardware or buggy Compaq software (such as Compaq's Media-Pilot and Tab-Works interfaces), the answer will cost you. The charge? Thirty-five dollars per question. That's right, *per question*. Don't think you'll be able to rattle off a bunch of queries for a flat fee. Marie Morris of Everett, Washington, tried that when she had problems with her Presario 9546. "They told me I'd have to pay another $35," Morris said.

Owners of earlier Presarios *should* still qualify for free hardware support, but have your credit card handy anyway: Under a policy instituted January 1, all callers to Compaq's lines must give a credit card number to be connected with a technician. At the end of the call, the techie decides whether the question is chargeable. And *that* depends, in part, on which Presario you own—basically, the newer your computer, the more limited your free tech support. With no credit card, your phone support is limited to Compaq's 900 line, which costs up to $30, at $2 per minute. Online support is available on all major services and on the Internet.

Warranty coverage has also changed with the new Presario line. On-site service is now limited to 90 days from the date of purchase. (Owners of earlier models got one year.) The remaining nine months of coverage are handled on a carry-in basis.

WHERE COMPAQ LEADS...

Although Compaq expects other PC companies to quickly follow its lead, so far only AST has shortened its warranty. Beginning with its spring line, all Advantage PCs come with a one-year warranty. Others are hinting at changes, though. NEC, for example, indicated that changes were afoot that would mean "less service and support for customers," according to a company spokesperson. Hewlett-Packard isn't making changes to its hardware support, but it will begin limiting free support on bundled software to 90 days after the first call.

For over a year, many PC companies have been charging for support on software—even when the package came bundled with the system. But it's often next to impossible to know what's causing a problem. Software conflicts are often disguised as hardware failures, and it can take days to figure things out. And what about out-of-date drivers or version incompatibilities? Compaq didn't have definitive answers to those questions, but according to Gus Kolias, Compaq's vice president of customer service, customers should expect to pay.

READ THE MANUAL, DUMMY

Driving the change is the way home PC owners are using technical support, according to Kolias. The lion's share of today's calls "go beyond the purview of why tech

ART: STEVE HUSTEDT/ILLUSTRATION

PHOTO: SILVIA OTTE

304 PC WORLD • MAY 1996

Ideal Configuration, Wrong Price

I'm looking at the Top 20 PCs review in your April issue. Number five on the Power Desktops list is a Dell Dimension XPS P166c system for $3679. Only problem is, Dell says it ain't so. The price I was quoted for the same configuration is more expensive than what you stated. I'm thinking about getting a Dell system, and the one you listed is a heck of a deal—but since my Dell customer service rep says that it doesn't exist, can you tell me where I can find one?

Patrick Solomon, Internet

Editor's response: Dell is right. Due to a miscommunication between the

company and *PC World*, the price we printed in April was low. The correct price ($4299) appeared in our May issue. We apologize for the inconvenience this error caused you. The good news is, the system continues to drop in price. This month the street price for the same model is $3359. —*Tracey Capen, executive editor*

Desktop Shortcuts for Kids

Thank you for your article on Windows 95 productivity ["Windows 95 at Warp Speed"]. There was a brief mention of Shortcuts on the desktop for children. I have created a Shortcut to a folder that contains Shortcuts to the .exe files of all the games that my 4- and 6-year-old children play. This reduces the risk of their playing with programs or files that they might damage, though it didn't stop my 4-year-old from opening 16 games of Jeez Ball simultaneously!

J. Brian Ridd,
Winnipeg, Manitoba

From Single Speed to Warp Speed

Great article ["Windows 95 at Warp Speed," April]! I discovered that I'd been running my Dell Pentium machine's quad-speed CD-ROM drive at single speed since I installed Windows 95 in August. Oh well. Thanks for the shortcuts on how to test this and other important features of my system.

Jeffrey Lubitz, Reston, Virginia

Author's note: Actually, your CD-ROM drive wasn't running at single speed; its caching was simply optimized for a slower drive, which affected its performance. Glad the tip helped. —*Scott Spanbauer, contributing editor*

Voice Your Zealotry Here

I wonder how many times writers will refer to the various Internet newsgroups without dealing with the many negative aspects of such "discussion" groups. The article "Election '96, Internet Style" perfunctorily mentioned five newsgroups where "you can voice your opinion." In my opinion, the sentence "Want to argue with strangers you'll never have to meet?" is not nearly enough of a warning label about Internet newsgroups.

In my experience, most of these newsgroups are infested with thoroughly unpleasant people. Overstuffed egos, dishonesty, bigotry, and zealotry abound. There are other political newsgroups besides the ones you mentioned, if one really wishes to do that sort of thing. But as far as I'm concerned, an honest, sensible person who tries to post in these groups is in for a very hard time.

Edgar J. Lawrence II, Dayton

Corrections and Clarifications

Contrary to information given in "Incredible Expanding Drives" (March), Fujitsu does not provide a toll-free technical support number. In addition, the street prices of the Toray Phasewriter Dual drive and media are actually $649 and $49, respectively.

In "Hot Picks for the Home Office" (April), the data transfer rate for the Iomega Ditto Easy 800 drive was stated incorrectly. It is 1 megabit per second.

Two Web addresses appeared incorrectly in May's "The Best Free Stuff Online." The Free Online Dictionary of Computing is at http://wfn–shop.princeton.edu/cgi–bin/foldoc?bg=on&action=Home&query=, and the Business Job Finder is located at http://www.cob.ohio–state.edu/dept/fin/osujobs.htm. In addition, the free copy of F-Prot Professional discussed in the article is available only in a DOS version, not Windows.

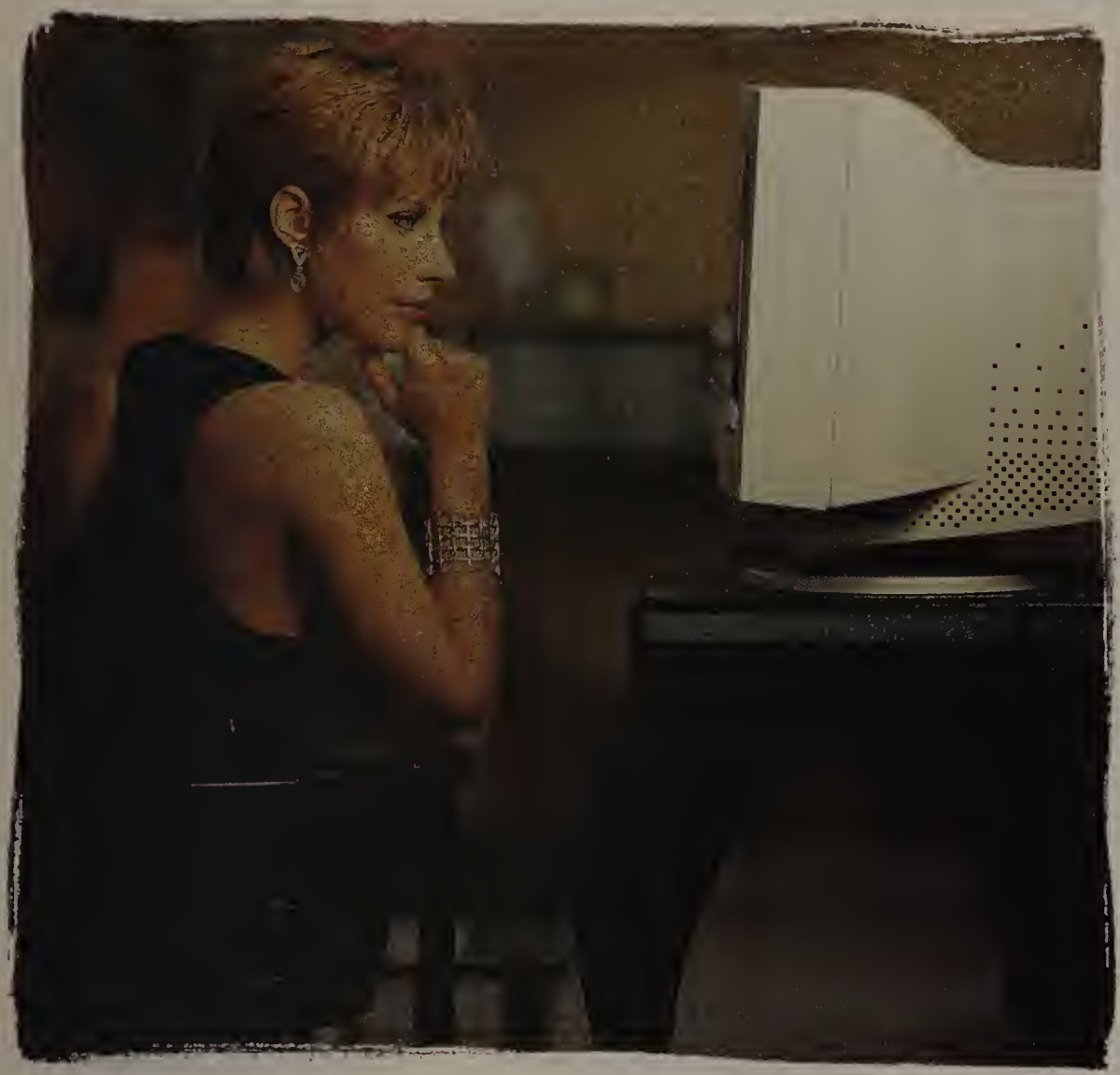
An item in *Feedback* (May) provided a BBS number for the Consumer Information Center. The group can also be reached on the Web at http://www.gsa.gov/staff/pa/cic/cic.htm or via e-mail at catalog.pueblo@gsa.gov.

In June's Top 20 PCs review ("Best of the Brands"), the price of the Digital Celebris GL 5166ST was listed incorrectly. The price is $4499.

PC World regrets the errors.

Letters *welcomes your responses and ideas.* *See page 14 for contact information.*

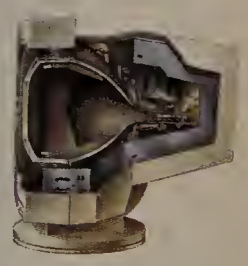
EUROPEAN ART COMES TO THE SCREEN, WITHOUT THOSE ANNOYING SUBTITLES.



From the continent that gave us museums and luxury automobiles come their combined spiritual equivalent: Nokia monitors. Nokia is already a household name (and cafe and office name too) throughout Europe. And now Nokia monitors are quickly winning the hearts and eyes of Americans too.

The European passion for beauty is expressed in the magnificent clarity of the screens and the soothing refresh rates.* The Nordic obsession with technical perfection is embodied in the variety and sensitivity of Nokia's controls and components. And the continental lust for life and good health is evident in the extraordinary TCO-compliant emissions controls Nokia invented.

Add to this the sheer elegance of the tooling and Plug 'N' Play connectivity under Windows® 95. A Nokia monitor is more than electronics. It's art. But, it's an avant garde that's quite easy to appreciate. Especially when it makes those darn little subtitles so much easier for you to read.



Nokia is the leading brand of monitors in Europe, and an engineering standard for the world

For more information call

1.800.BY NOKIA.

Dept. Code: N51

NOKIA

MONITORS

Circle 180 on reader service card

*When used with an appropriate graphics card. Models are continuously upgraded. Size of CRT measured diagonally. Actual viewing size is slightly less. Manufactured and designed in Finland in an ISO 9001 approved environment. © 1996 Nokia Display Products, Inc. Multigraph, Valuegraph, MicroEmission and FullScreen are trademarks of Nokia Display Products, Inc. E-MAIL: bynokia@aol.com. Prices and specifications subject to change without notice. The Energy Star emblem does not represent EPA endorsement of any product or service. All other trademarks are the sole property of their respective companies.

Why the best multimedia monitors

The features that make ViewSonic monitors the perfect choice for multimedia also make them perfect for the internet.

Consider the many advantages of the ViewSonic 17GA (16.0" viewable) and 15GA (14.0" viewable) PerfectSound™ multimedia monitors. They're the recognized leaders in affordable high performance screen technology with .27mm dot pitch, Super Contrast screens and ARAG® anti-reflection, anti-glare coating—all of which contribute to richer colors and overall sharper, brighter, more detailed images from center screen to corner. Producing resolutions up to 1,024 x 768 at 85 Hz provides flicker-free images, reducing fatigue and eye strain.

Dual bezel integrated speakers deliver full, rich stereo sound while saving desktop space. There's even volume and mute controls to let you listen without distracting others. There's also a built-in microphone,* headphone jack, and external microphone port. For added convenience, OnView™ controls let you make image, audio and color adjustments via a simple on-screen menu.

Your windshield on the information superhighway.

As the internet continues to grow and fulfill its potential with more sophisticated graphics and real-time sound, you'll appreciate these same ViewSonic multimedia monitors even more.

(909) 869-7976 Fax: (909) 869-7958 • Call FaxSonic™ at (909) 869-7318 (24-hour fax-on-demand) Request Docs. 15"–143, 17"–150
Internet: http://www.viewsonic.com • © 1996 ViewSonic Corporation. Corporate names and trademarks are the property of their respective companies.
* Optional microphone adapter may be required with certain Macintosh® systems.

are also the best internet monitors.

When it comes to applications like spreadsheets, word-processing, charts, graphs, business suite software or multimedia presentations, again these monitors are the perfect solution.

ViewSonic has a full line of monitors ranging from 14" to 21" (various viewables) and each comes with a limited 3 year warranty on CRT, parts and labor. We also offer an optional Express Exchange℠ Service program that insures 48 hour replacements.

Top-rated time and time again.

How's this for high praise?

Home PC, in the April '96 issue, included the 17GA in their Top 100 Hardware Products.

MacUser magazine, in their December '95 issue, named the 17GA its Best Buy and in their March '96 issue, gave the 15GA a coveted Four Mice rating.

Windows magazine, in their December '95 and April '96 issues, "recommended" the 17GA.

February '96 issue of PC Graphics and Video "Highly Recommended" the 17GA.

Model	15GA	17GA
CRT Size	15" (14.0" viewable)	17" (16.0" viewable)
Dot Pitch	0.27mm	0.27 mm
Max. Resolution	1280 x 1024	1280 x 1024
Recommended Resolution	1024 x 768 @ 85 Hz	1024 x 768 @ 85 Hz
*Integrated Spkrs./Mic.	Yes	Yes
TCO Low Radiation	Yes	Yes

Call 800-888-8583 and ask for agent 7436 for a dealer where you can see and hear the ViewSonic monitors that are the best of all possible worlds.

ViewSonic®

Circle 224 on reader service card

FOR YOU BARGAIN HUNTERS, THIS WOULD BE KNOWN AS OPEN SEASON.

200MHz PENTIUM® PRO PROCESSOR
DELL DIMENSION™ XPS Pro200n

- Mini Tower Model
- 32MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- NEW Imagine 128 Series 2 Graphics Accelerator with 4MB VRAM
- 8X EIDE CD-ROM Drive
- MS® Office Professional with Bookshelf for Windows® 95 (N.F.I.)
- Microsoft® Windows NT™/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty†
- ★ *Upgrade to 64MB of EDO memory, add $699.*
- ★ *Upgrade to 1 Year of Windows NT software support, add $149.*
- ★ *Upgrade to 2GB SCSI hard drive, add $375.*

$3649

Business Lease◊: $131/Mo.
Order Code #500274

200MHz PENTIUM PRO PROCESSOR
DELL DIMENSION XPS Pro200n

- Mini Tower Model
- 16MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of EDO memory, add $299.*
- ★ *Upgrade to 3 Years of On-site△ Service, add $99.*
- ★ *Upgrade to the Imagine 128 Series 2 with 4MB VRAM, add $329.*

$2799

Business Lease: $104/Mo.
Order Code #500273

200MHz PENTIUM PROCESSOR
NEW DELL DIMENSION XPS P200s

- Mini Tower Model
- 32MB SDRAM Memory
- 512KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- 28.8 Data/Fax Modem
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *1.6GB/3.2GB Travan Tape Back-up, add $249.*

$3449

Business Lease: $128/Mo.
Order Code #500272

200MHz PENTIUM PROCESSOR
NEW DELL DIMENSION XPS P200

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of SDRAM memory, add $299*

PICTURED SYSTEM

$2499

Business Lease: $92/Mo.
Order Code #500271

166MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P166s

- Mini Tower Model
- 32MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

$2799

Business Lease: $104/Mo.
Order Code #500270

133MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P133c

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 15LS Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 512KB Pipeline Burst Cache, add $49.*

$2199

Business Lease: $81/Mo.
Order Code #500269

133MHz PENTIUM PROCESSOR
DELL DIMENSION P133t

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15LS Monitor (13.7" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *3Com® EtherLink® Interface Combo Card, add $99.*
- ★ *28.8 Data/Fax Modem, add $129.*
- ★ *ACS-31 Speakers and AWE32 Sound Card, add $219.*

$1799

Business Lease: $67/Mo.
Order Code #500268

100MHz PENTIUM PROCESSOR
DELL DIMENSION P100

- Mini Tower Model
- 8MB EDO Memory
- 256KB Pipeline Burst Cache
- 850MB Hard Drive [12ms]
- 14XE Monitor (13.19" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 16MB of EDO memory, add $99.*
- ★ *Upgrade to a 1.6GB hard drive, add $90.*

$1449

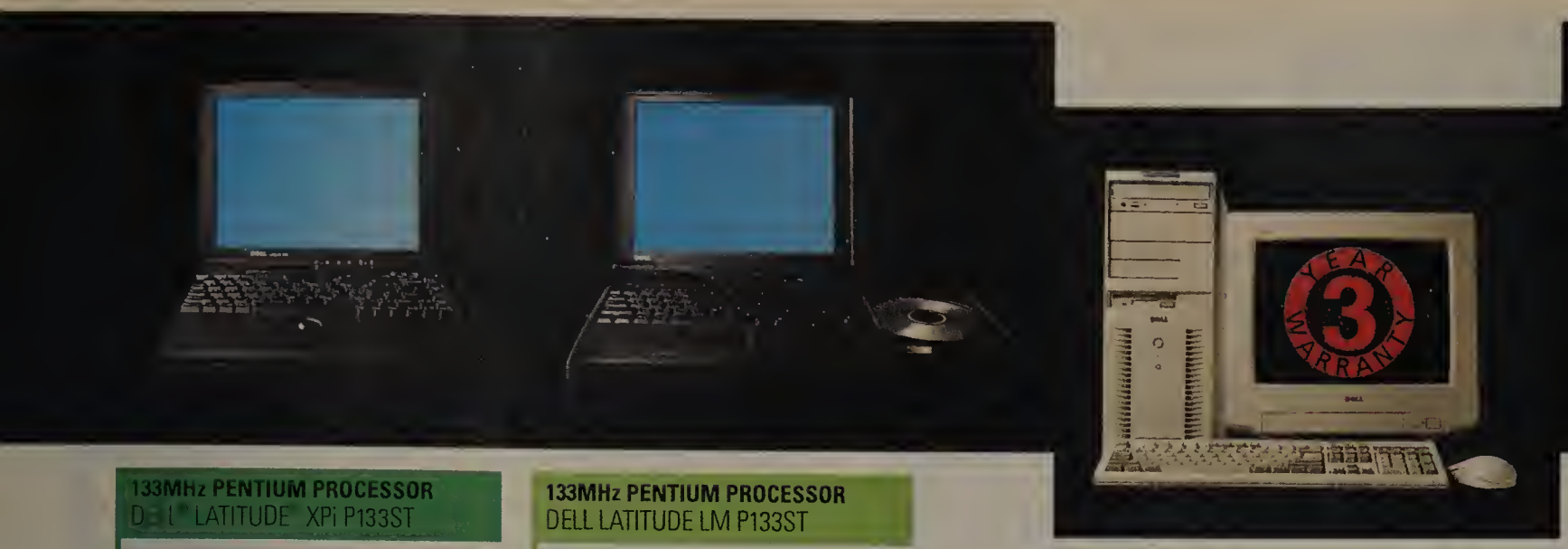
Business Lease: $54/Mo.
Order Code #500267

NEW STANDARD 3 YEAR LIMITED WARRANTY WITH ALL DELL DIMENSION SYSTEMS.

‡Pricing is not discountable. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite D, Austin, TX 78758. ◊Business leasing arranged by Leasing Group, Inc. *System weight with floppy drive in options bay. △On-site service provided by BancTec Service Corporation. On-site service may not be available in certain remote locations. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo are registered trademarks and Windows NT is a trademark of Microsoft Corporation. XJACK is a registered trademark of US Robotics Mobile Communications Corporation. 3Com and EtherLink are registered trademarks of 3Com Corporation. ©1996 Dell Computer Corporation. All rights reserved.

intel inside pentium PROCESSOR

Designed for Microsoft® Windows®95



133MHz PENTIUM PROCESSOR
DELL® LATITUDE™ XPi P133ST

- NEW Network-ready Notebook
- 11.3" SVGA Active Matrix Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty†

★ *Dell Latitude DeskDock™ station with Advanced Port Replicator, add $229.*

PICTURED SYSTEM

$3899‡
Business Lease: $140/Mo.
Order Code #800047

133MHz PENTIUM PROCESSOR
DELL LATITUDE LM P133ST

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds*
- Extendable 1 Year Warranty

★ *Upgrade to a 1.3GB hard drive, add $400.*
★ *2nd Lithium Ion Battery, add $249.*

PICTURED SYSTEM

$3499‡
Business Lease: $129/Mo.
Order Code #800051

100MHz PENTIUM PROCESSOR
DELL LATITUDE XPi P100SD

- NEW Network-ready Notebook
- 10.4" SVGA Dual Scan Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to a 1.2GB hard drive, add $400.*

$2699‡
Business Lease: $100/Mo.
Order Code #800053

100MHz PENTIUM PROCESSOR
DELL LATITUDE LM P100SD

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to 16MB of RAM, add $299.*

$2799‡
Business Lease: $104/Mo.
Order Code #800049

BUILD PERFORMANCE WITH THESE OPTIONS.

DELL DIMENSION	ADD
1.6GB/3.2GB Travan Tape Back-up	$249
3 Year Next-business-day, On-site Service	$99
28.8 Data/Fax Modem	$129
Win95 Mechanical Keyboard	$29
3Com EtherLink III Network Interface Card	$79

DELL LATITUDE	ADD
Additional 8MB RAM	$299
Additional 16MB RAM	$699
810MB Hard Drive Upgrade	$200
28.8 XJACK®/Cabled Modem	$259
External Dell 4X CD-ROM	$359
3Com Ethernet 10BASE-T Network Card	$159
Leather Carrying Case	$129

DIRECT NEWS ON THE INTERNET
For free updates on Dell's product offerings, pricing and other news electronically, send an email message to "DirectNews-request@dell.com." Please use the word "subscribe" as the body of your message.

DELL®

TO ORDER
800-759-0391
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03151

MultiSync MT800
12.7"w x 5.9"h x 16.0"d, 17.6 lbs.

With their extraordinary lightweight design, the new MultiSync® MT600 and MT800 projectors can go anywhere you can go. Down the hall, or down the road.

And thanks to their uncanny ability to project bright, crisp and evenly illuminated images, you no longer have to sacrifice image quality for portability.

You see, MultiSync MT™ projectors deliver full-color, high-resolution images that can be adjusted to as large as 300" diagonally. A simple task via a remote that controls your computer and presentation, as well as the projector.

MultiSync MT600
12.7"w x 5.9"h x 16.0"d, 15.9 lbs.

All you have to do is plug in a source, which, due to simple connectivity and compatibility, can be anything from a notebook computer to a VCR.

Now, shouldn't you explain all this to your coworkers? They're still wondering why you strolled past the water cooler holding this magazine out in front of you. To find out how to get a hold of the real thing, call 1-800-NEC-INFO.

SEE, HEAR AND FEEL THE DIFFERENCE.™

NEC

EXACTLY HOW PORTABLE ARE THE NEW MULTISYNC MT PROJECTORS? GRIP THE SIDES OF THIS MAGAZINE AND WALK AROUND THE OFFICE.

Visit our new web site at http://www.nec.com

For more information via fax, call 1-800-366-0476 and request document #[illegible]1. MultiSync [illegible] MT [illegible] Hear [illegible] d Fe[illegible]e D[illegible] NEC Tec[illegible]
©1996 NEC T[illegible] Key # 28225

Circle 176 on reader service card

When Do You Call In the Consultant?

If your company needs nuts-and-bolts technical help, does it make more sense to hire an outside consultant or to bring a full-time technical guru on board? This month Jim Wolande, CEO of Triangle Technologies, which offers data communications equipment and services in Downers Grove, Illinois, explains how he weighed the pros and cons of third-party versus in-house tech support—and ultimately hired out. —*Editor*

Even Experts Need Help

Even if you already have an in-house technical team, there are plenty of times when you need extra help—say, when a special project such as a major system upgrade threatens to take your technicians away from their routine duties. But are you better off hiring an in-house expert or farming out those new tasks to strangers?

My 26-person company is in the computer business, so you'd think that for us this question would be a no-brainer. After all, we pride ourselves on providing our customers with state-of-the-art data communications equipment and services. But until recently we were like that old yarn about the shoemaker's children going unshod. Despite our technical knowledge, we were just as susceptible to time-wasting paper shuffling and duplicated effort as any of the banks, retailers, and other companies that come to *us* for help.

We started our business by putting all our inventory, order entry, and other records into an old-fashioned relational database (with terminals linked to a 486 server running the PICK operating system). But faced with a 35 percent annual growth rate, we soon found our systems couldn't keep up. When order entry people entered customer information, for example, people in sales, inventory, and accounting would look up the paper order and reenter the data into their departmental systems.

To get the kind of technology base we needed—stable, powerful, flexible, and secure—we knew we'd have to spend big money upgrading our desktop PCs and network server to Pentiums, and our operating system to Windows NT. We'd also have to invest in a customer information system, specialized software that would let everyone in the company share the same bread-and-butter information. All of this cost $200,000, the biggest expense my company ever had, and that didn't include the cost of hiring a technical specialist to install and maintain it.

KEVIN HORAN

We weighed the pros and cons of hiring a full-time technician. On the pro side, we felt an in-house technician would gain a deep knowledge of the company's needs. It would be easier to monitor the employee's work, and in the long run they could be less expensive than consultants.

But the cons list proved longer. We needed someone with sophisticated networking skills. The average network administrator with Novell NetWare certification costs around $50,000 annually, and someone with the additional skills we needed in SQL Server, PowerBuilder, and Windows NT commands twice as much. While we might have been prepared to spend big bucks on the right person, I knew that finding a technician with those skills in the Midwest—and then keeping them out of the hands of much wealthier companies—would be difficult.

Time was also an issue. We wanted to get our hardware and software installed quickly so that we could become more productive right away. But it would easily take four months to find and hire someone and get them up to speed. Finally, we wondered what our technical guru would do to keep busy once everything was up and running.

Jim Wolande, CEO of Triangle Technologies, weighs the pros and cons of third-party help.

Going Outside: Ins and Outs

Next we weighed the pros and cons of hiring consultants. On the pro side, we felt consultants are always available; they're not going to be hired away. And since most consulting firms offer teams of experts, we'd be more likely to get a complete, well-rounded perspective.

Still, consultants are chancy for two reasons: They can cost a fortune if you don't monitor their time and services diligently; and many consultants work off-site unless other arrangements have been made, so it's easy to fall into the "out-of-sight, out-of-mind" trap. This

Share Your BIG Ideas with the 29" SVGA Monitor

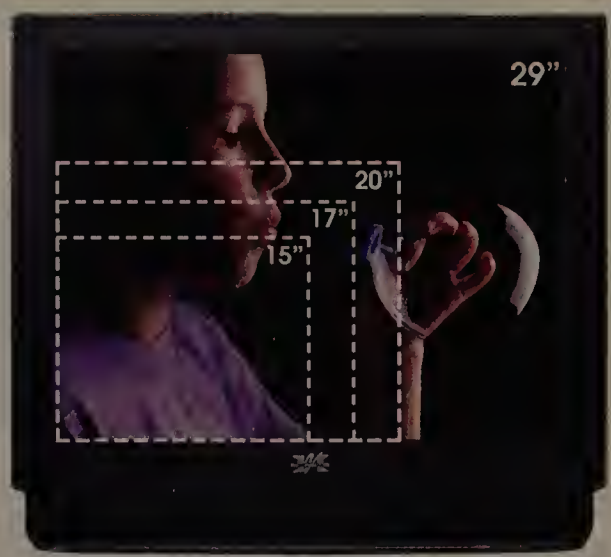
Exciting new 29 *inch* MVL2975XL is perfect for:

Education, Training & Presentations

Trade Show Displays & Showrooms

Video Conferencing & Distance Learning

Internet Web Surfing



- Super VGA multifrequency monitor
- Dual amplified speakers
- Super flat screen, double focus
- 0.75 mm dot pitch
- Up to 1024 x 768 interlaced resolution
- Two year warranty

Best Buy! $1,995 MSRP

MULTIVIDEO LABS
29 Airpark Road, Princeton, NJ 08540
609.497.1930 · FAX 609.497.1945
West Coast Sales 909.397.7641
http://www.mvl.com

Circle 154 on reader service card

Carrying "excess inventory?"

Turn your excess inventory into a tax break and help send needy kids to college.

Request a free guide to learn how donating your slow moving inventory can mean a generous **TAX WRITE-OFF** for your company.

Call 708-690-0010
Fax 708-690-0565

630 area code starting 8/3/96
Email scholar@eduassist.org

EAL
Educational Assistance Ltd.
P.O. Box 3021
Glen Ellyn, IL 60138

Excess inventory today ... student opportunity tomorrow

means you must apply extra managerial skills to ensure that the consultants' tasks are completed on time and within budget.

After interviewing several consultants, we hired a highly reputable local firm, DC Systems of Oakbrook Terrace, Illinois. We liked them because they laid out all the choices facing us and were realistic about prices. They estimated $42,000 per year for developing and overseeing the database; that's $70,000 less than the $112,000 that a full-time in-house staffer would have commanded in salary and benefits. As an outside source, they also were able to give us an objective view that an in-house person may have been reluctant to provide.

Keeping Control of Costs

Unfortunately, we learned the hard way about what it takes to manage even the best consultant relationship. For example, we had told another team of consultants, whom we had earlier hired to develop our accounting software, that we needed some code written to link DC Systems' order entry and inventory systems with the accounting software. But we didn't specify a due date, and two months went by without any sign of the needed code. As a result, the implementation of our new system was delayed 70 days and we spent an additional $15,000 to $20,000, about 25 percent more than the project might have cost had we paid closer attention.

After that, we monitored every detail. Our department heads and the consultants now have weekly meetings in which each order of business is spelled out and agreed to in writing, with time frames that we set. And we stipulated a to-do checklist that must accompany every task.

By managing the relationship and the processes more closely, we're not only able to make consulting costs more reasonable, but we also get the exact type of expertise we need—when we need it.

Edited by Bronwyn Fryer

Bronwyn Fryer is a contributing editor for PC World. *If you use PCs to manage people and other resources in a business environment, we want to hear from you—we pay $300 for published columns. See page 14 for contact information.*

FROM NOW ON
WHEREVER
YOU
ARE, IS EXACTLY
WHERE YOU
SHOULD BE.

Hitachi Introduces

MOBILIZED COMPUTING.

To everyone conditioned in the belief that to effect a goal you must at specific times be in a particular place, we have an announcement: You're off the hook. You now have the means to sway outcomes, to project power, to control events - to wreak havoc if you like - from any spot you find convenient. The instruments of this are the new Hitachi Notebooks. Exemplars of an idea called Mobilized Computing™. The first principle: You never know where you'll be when you need to plug in. The second: No one has time to waste on cyber-trivia. So every Hitachi Notebook comes pre-configured and pre-tweaked. Ready to connect via 28.8 modem to the Net, the online services, two-way fax. Or to jump onto any local area network through that rarest of electronic luxuries, a built-in LAN port. Your world is a big place. Mobilized Computing is designed on the assumption that you'll want to use all of it.

HITACHI
MOBILIZED COMPUTING™

Remote Control™

Circle 109 on reader service card

Hitachi PC Series C Notebook available with 11.8" active matrix screen, Pentium® 120 MHz chip. Series M Notebook comes with built-in LAN port. Available with 11.8" active matrix screen and Pentium® 133 MHz chip.

© 1996 Hitachi PC Corporation (USA) All rights reserved. Mobilized Computing™ and Remote Control™ are trademarks of Hitachi PC Corporation (USA), which may be registered in some jurisdictions. The Intel Inside Logo & Pentium® are registered trademarks of Intel Corporation. All other marks are owned by their respective companies.

For information on your nearest dealer, call 1-800-Hitachi (448-2244) Website address: www.HitachiPC.com

Free Software!*

RECORE
Award-Winning
OCR

The "Scanning OS"

Now You Can Scan Direct to Any Windows Application

OCR It!

Click once to scan & convert your paperwork to text. No more retyping!

E-Mail It!

Once you scan, you can send your image over electronic mail without leaving the application!

Fax It!

Presto! PageManager turns your scanner into a stand-alone fax machine. Just scan your pages straight to your fax modem!

Scan Direct!

Scan to any application! Add 10 applications for one button scanning to Print, Copy, Fax, OCR & E-mail!

File It!

Save files in an electronic file cabinet with text search tools. Type notes & highlight important info.

Print/Copy It!

Turn your scanner into a copy machine! Just Drag & Drop to print, copy or edit what you scanned.

Drag & Drop It!

Drag & Drop documents to the applications you use most! Just add them to the Application Bar.

Add Your Apps!

Plug-in your favorite Windows applications! You can add multiple applictions like MS Word, Excel, Adobe Photoshop, Presto! Pro, etc.

Other Features!

Presto! PageManager offers Text Annotation & Built-In OCR.

Has this happened to you:
You spend $500 for great new software, but it doesn't work with your scanner? So you spend $400 for a new scanner, and now it doesn't work with your existing software?

We know all your concerns. That's why we offer Presto! PageManager LE, the "Scanning OS" that adds scanning abilities to any Windows application. No hassles, no worries.

Call Today for Your FREE* Software!

800-670-7167

Or Download Presto! PageManager**

http://www.tophat.com

Presto! PageManager LE will turn your scanner into a multi-function peripheral. You can have one-button scanning, printing, faxing, copying, editing, & OCR with any Twain-compliant scanner.

Presto! PageManager adds value to your scanning investment. Call today for Presto! PageManager, and for the first 100,000 callers, it's FREE!* ($99 value).

Presto! PageManager LE

* There is a non-refundable $9.95 (US) or $19.95 (Canada) shipping & handling charge. Outside US 510-252-0267. ** There is a non-refundable $9.95 charge to download from the Internet. Please have your Visa, Mastercard, or American Express card ready when you call. CD-ROM format. One copy per household. Information and prices subject to change without notice.

© 1996 NewSoft, Inc. Presto!, Presto! PageManager, and Magic Within are trademarks of NewSoft, Inc. All other product names are trademarks of their respective companies. All rights reserved.

Circle 158 on reader service card

E-Mail Troubles? You Have No Idea!

E-mail is like bad breath or body odor. If you've got a problem with it, you're probably the last to know.

And guess what? You have a problem. Short of asking, you can't begin to find out what a particular message will actually look like once it's made its way to someone else's screen. In fact, you can't even be sure where it's been.

Think of it as the fax problem, only worse. Do you know if your fax machine is sending pages with ugly dark stripes down the middle or with your company's name misspelled in the header? Neither did the correspondents I notified. And compared to what can happen with e-mail, those glitches are downright trivial.

Just this morning I got the latest piece of useless e-mail that had never been meant for my eyes. It happens all the time. After somebody sends me a press release via an e-mail list, I get replies from dopes who apparently set their e-mail packages to "answer all" recipients on any distribution list. Within a company, this may be a fine idea, if only to demonstrate to the boss that you are minding the store. It's not so wonderful when your reply annoys a hundred people in the outside world who don't know you from Adam Ant.

And address lists? You may like to send so-called blind copies so that your recipients have no idea how many other people are seeing that missive supposedly meant "for your eyes only." Unfortunately, many e-mail systems won't let you do so—or worse, pretend to and then screw up when they send messages through gateways to the Net.

By Stephen Manes

ERIK BUTLER

Having to scroll through dozens of e-mail addresses before getting some crummy two-line message is a productivity disaster; even worse is the thought that any jerk who's received the e-mail can steal the list whole.

Nightmare Attached

Then there's the nightmare of attached files, which presumably should arrive in the same state they left. My editors and I routinely exchange versions of my column over CompuServe; no matter how often it travels back and forth, it retains its Microsoft Word formatting.

But we do not even attempt to send the file as an attachment via the Internet, because we know that it's a surefire recipe for disaster. To traverse the Net, some of whose denizens remain in the world of 7-bit ASCII, attached files typically are encoded into text files that look like gibberish. That would work if the gibberish were produced and decoded in a standard way. No such luck.

The scheme known as uuencode/uudecode is the most popular. But others flourish, such as the Mac-oriented BINHEX. And coming on strong is MIME, which stands for Multipurpose Internet Mail Extensions. MIME describes the structure of a message rather than the methods used to encode the data—though it prefers an encoding scheme called base64.

Things are changing fast. But for the moment, the service that best handles attachments to and from the Net is probably America Online. It's far from perfect, though; for one thing, it can't decode messages with multiple attachments. The Microsoft Network automatically encodes outgoing attachments with uuencode and can decode some inbound uuencoded attachments, but all it can do with MIME stuff is hand you the undecoded text. CompuServe treats all incoming attachments as undecoded text and simply refuses to send messages with attachments via the Net at all. Both CompuServe and MSN say they're working on MIME support.

Some mail programs have sophisticated encoding and decoding built in; many don't. You can get all sorts of add-on decoders for free, but most of the ones I've seen begin with unpleasant notices that they're still in beta and you use them at your own risk.

> **We never even attempt to send a file as an attachment over the Internet. That, we know all too well, is a surefire recipe for disaster.**

Even assuming your recipient can decode your attachment properly, another problem remains: Does your recipient have the tools to read it? If you send a Word 6 file, woe betide your recipient who never upgraded from Word 2. The only sure thing remains plain ASCII text, which of course summarily loses all formatting and, if it ends up doing something stupid like including lots of carriage returns, will cause major headaches in its own right.

Remember, only some of your correspondents will tell you about these problems. So every now and then, it's worth asking a few people you trust how your e-mail is looking nowadays.

Just hope you can decode the answer.

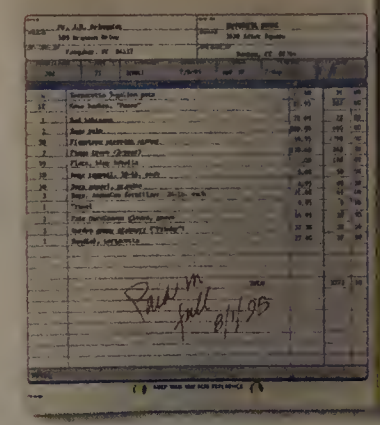
PC World *contributing editor Stephen Manes is a columnist for the* New York Times *and coauthor of* Gates: How Microsoft's Mogul Reinvented an Industry *(Touchstone/Simon & Schuster, 1994, 800/223-2348).*

PAPERPORT ix MEANS YOU'LL NEVER AGAIN HAVE TO WASTE TIME RETYPING

It can scan thousands of words in minutes—from virtually any type of document. Reports. Memos. Letters. Then PaperPort ix's integrated TextBridge™ OCR software converts these words to digital format so they can be edited or copied.

PAPERPORT ix KEEPS TRACK OF YOUR CONTACTS

Tired of forgetting people's names and numbers? Just scan business cards into PaperPort, and its CardScan SE™ software automatically creates a file of your business contacts—all on your personal computer.



PAPERPORT ix MAKES SMART ARCHIVES

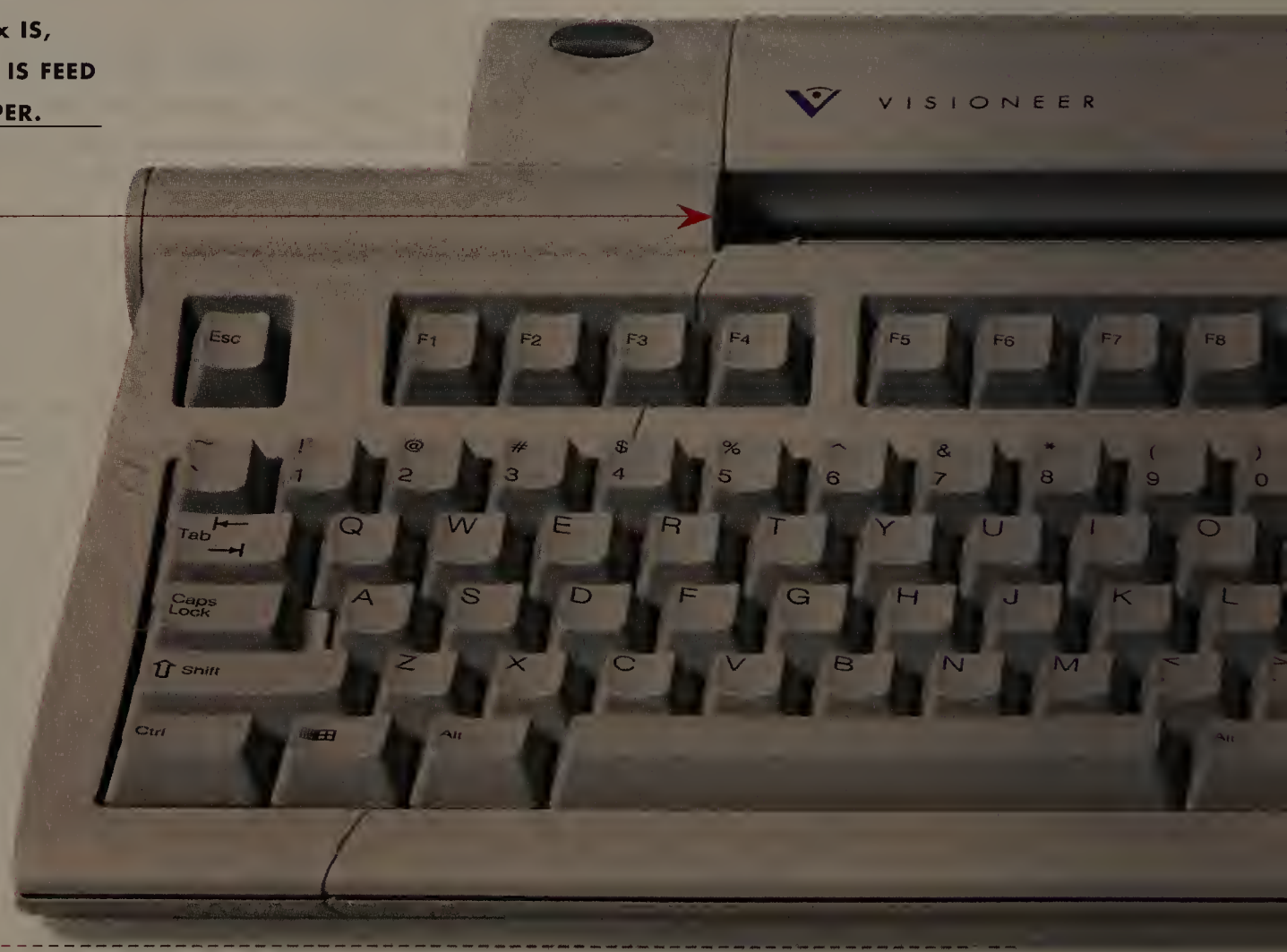
Imagine never having to rummage to find an important slip of paper: PaperPort lets you create archives of critical documents—receipts, news clippings (up to 30 inches long), invoices, even those love notes from the 7th grade.

PAPERPORT ix FITS EASILY INTO YOUR WINDOWS SYSTEM

Meet the world's smallest integrated scanning keyboard. (It's Windows 95 compatible, to boot.) Just plug it in, and go.

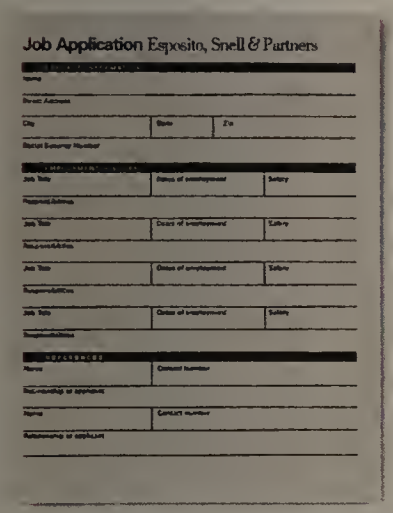
Clocks in at 10,000

TO SEE HOW EFFICIENT OUR PAPERPORT ix IS, ALL YOU HAVE TO DO IS FEED IT A PIECE OF PAPER.



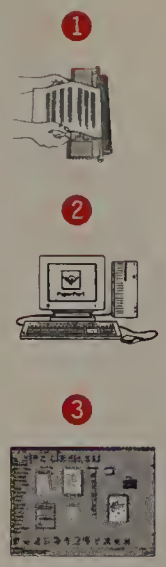
PAPERPORT ix MAKES IT EASY TO FILL OUT FORMS

Whether you're filling out an insurance form or a job application, just drag your scanned form onto our FormTyper™ icon. Like magic, it brings up the form on your computer and finds all the fields you need to fill out. All you have to do is tab from field to field, and type.



PAPERPORT ix LETS YOU SEND PAPER OVER THE INTERNET

Yep. That's right. PaperPort ix comes with Netscape Navigator,™ free. Which means you can use PaperPort ix to scan a document, send it to people over the Internet, and they can view it on their computer—instantly. It's even cheaper—and a lot more private—than faxing.



PAPERPORT ix IN THREE EASY STEPS

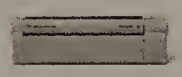
1. Feed in a document. In as quick as two seconds, it's scanned.
2. Drag and drop it onto one of 150 popular applications.
3. Edit, copy, print, email, fax, file, or tweak the material as necessary.

PAPERPORT ix TURNS YOUR PRINTER INTO A COPIER, AND YOUR PC INTO A FAX MACHINE

Save desk space—not to mention dollars. Scan a document into PaperPort and print it from your personal computer. Or save your paper and fax it, using your modem.

TAKE A MINUTE TO CHECK IT OUT:

1-800-787-7007, ext. 206
http://www.visioneer.com
Or contact an authorized reseller.



Can't bear to part with your current keyboard? Then check out the PaperPort Vx.™ It's sleek, and it fits between your monitor and keyboard.

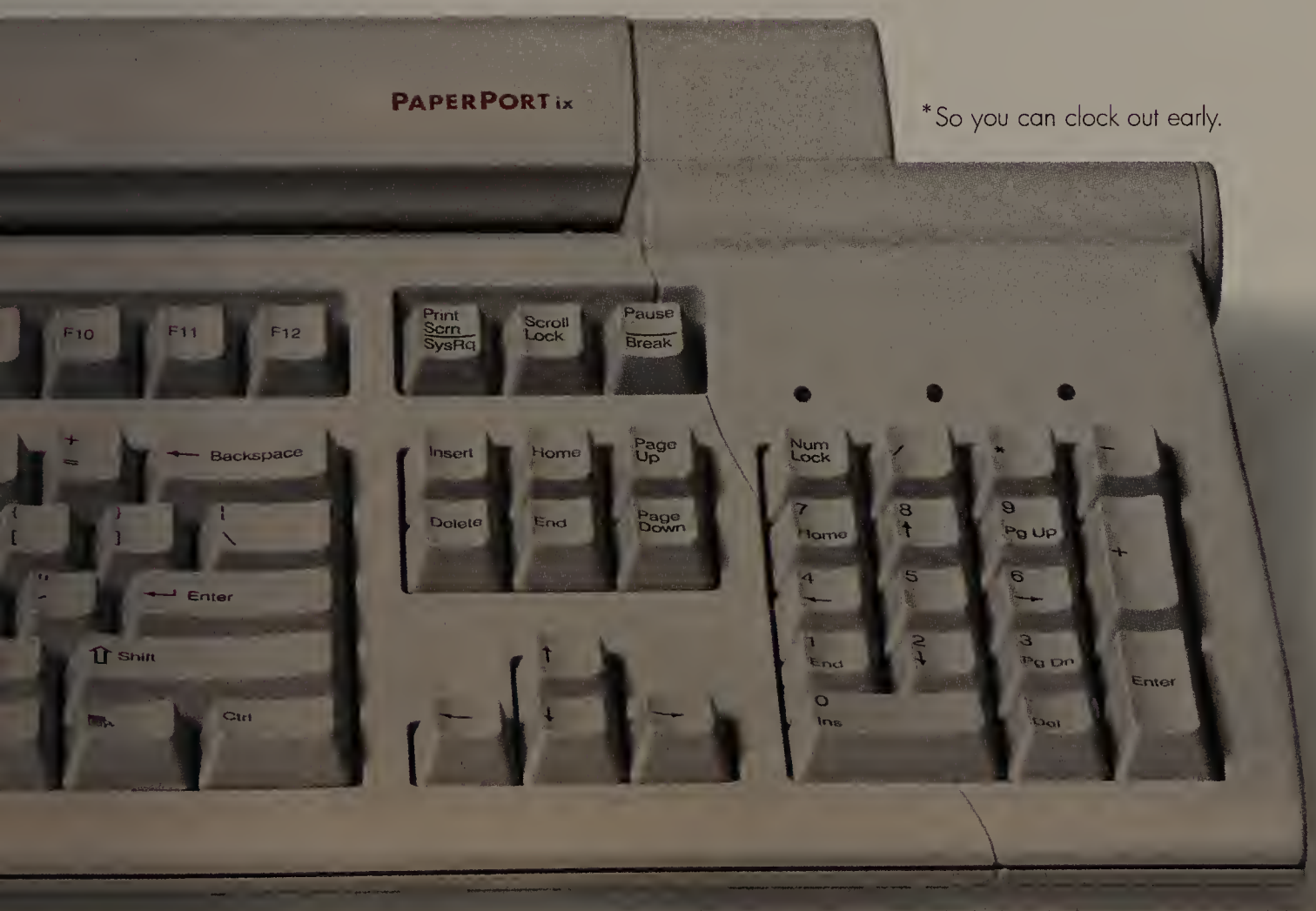
INTRODUCING

PAPERPORT ix™

VISIONEER

Circle 187 on reader service card

words per minute.*



*So you can clock out early.

©1996 Visioneer, Inc. All rights reserved. Visioneer, PaperPort, PaperPort Vx, and PaperPort ix are trademarks of Visioneer. The Visioneer logo is a registered trademark. Other brands and product names are trademarks of their respective companies. VIS6004 5/96

Designed for Microsoft Windows 95

intel inside pentium® PROCESSOR

Best Pentium processor-based PC at entry-level price.

- Intel 75 or 100 MHz Pentium processor
- 8–16MB RAM, expandable to 128MB
- EDO RAM
- Optional 256KB cache
- 640MB** high-performance Enhanced-IDE hard drive
- PCI integrated graphics accelerator and 1MB DRAM standard, upgradable to 2MB
- Flash BIOS for easy upgrade
- Designed for Windows® 95
- Preloaded HP DMI Desktop Management Interface
- Free three-year limited warranty for parts and labor[1]

from $1,319*

HP Vectra VE

Best managed PC.

- Intel 75, 100, 120, 133, 150 or 166 MHz Pentium processor
- LAN Remote Power
- PCI integrated 32-bit 10Base-T Ethernet interface
- Network certified and preconfigured for Microsoft® and Novell clients
- Preloaded HP DMI Desktop Management Interface
- Vectra Op-Center
- Norton Smart Disk Doctor
- Parallel transfer driver preinstalled for faster LAN packet processing
- Advanced security meeting C2 level
- 64-bit graphics accelerator on PCI bus
- 1MB video RAM, expandable to 2MB
- 8 or 16MB EDO RAM, expandable to 128MB
- 840 or 1280MB Enhanced-IDE hard drive
- 4 mass storage shelves (3 front accessible), 4 expansion slots
- Two 32-bit PCI slots
- Flash BIOS for easy upgrade
- Designed for Windows 95
- Free three-year limited warranty for parts and labor[1]

from $1,449*

HP Vectra XM

Leading Pentium processor/PCI performance at an affordable price.

- Intel 100, 120, 133, 150 or 166 MHz Pentium processor
- Desktop and minitower packages
- 256KB burst synchronous cache
- 8–16MB RAM, expandable to 128MB
- EDO RAM
- PCI/ISA architecture
- 640MB** high-performance Enhanced-IDE hard drive
- PCI integrated graphics accelerator and 1MB DRAM standard, upgradable to 2MB or Matrox Millenium PCI graphics card with 3D acceleration and 2MB WRAM upgradable to 8MB
- Flash BIOS for easy upgrade
- Full plug-and-play capability
- Designed for Windows 95
- Preloaded HP DMI Desktop Management Interface
- Free three-year limited warranty for parts and labor[1]

from $1,579*

HP Vectra VL

[1]In Canada, call 1-800-387-3867. *Average U.S. street price. Monitor not included. **Other capacities available. HP Vectra PCs come with MS-DOS® 6.2 and MS Windows for Workgroups 3.11; or Windows 95, OS/2 or Windows NT included. [1]First year, on-site, 24-hour, next-day service. Second and third year, return to dealer. Microsoft, MS-DOS, Windows and Windows NT are U.S. registered trademarks of Microsoft Corporation. Pentium and the Intel Inside logo are U.S. registered trademarks of Intel Corporation. OS/2 is a registered trademark of the International Business Machines Corporation.
©1996 Hewlett-Packard Company PPG430

PC MAGAZINE EDITORS' CHOICE™

February 20, 1996
HP Vectra XU 6/150

The ultimate PC.

- Intel Pentium Pro 150, 180 or 200 MHz processor with 256KB integrated cache
- Supports dual processing with secondary Pentium Pro socket
- 128-bit high-performance memory architecture
- 16–32MB ECC DIMM memory standard, expandable to 256MB with 8 DIMM memory expansion slots
- PCI integrated Ultra SCSI Fast 20 interface with 20MB/s throughput
- 1,000MB** SCSI-2 high-performance hard drive
- PCI Matrox Millenium graphics card with 3D acceleration and 2MB WRAM, upgradable to 4MB or 8MB
- 7 mass storage shelves (5 front accessible)
- expansion slots: 3 PCI, 1 PCI/ISA combo and 2 ISA
- 0Base-T/100VG AnyLAN selectable I NIC with up to 100 Mb/s throughput
- grated 16-bit audio and 4X CD-ROM
- rosoft Windows NT® 3.51
- three-year limited warranty for and labor[1]

$3,939*

HP Vectra XU

Exceptional performance and expandability at an affordable price.

- Intel Pentium Pro 150 MHz processor with 256KB integrated cache
- 128-bit high-performance memory architecture
- 16MB DIMM memory standard, expandable to 256MB with 8 DIMM memory expansion sockets
- 1,000MB** Enhanced-IDE hard drive
- PCI Matrox Millenium graphics card with 3D acceleration and 2MB WRAM, upgradable to 4MB or 8MB
- 7 mass storage shelves (5 front accessible)
- 6 expansion slots: 3 PCI, 1 PCI/ISA combo and 2 ISA
- Integrated 16-bit audio and 4X CD-ROM
- Microsoft Windows NT 3.51 or IBM OS/2® Warp
- Free three-year limited warranty for parts and labor[1]

from $3,419*

HP Vectra VT

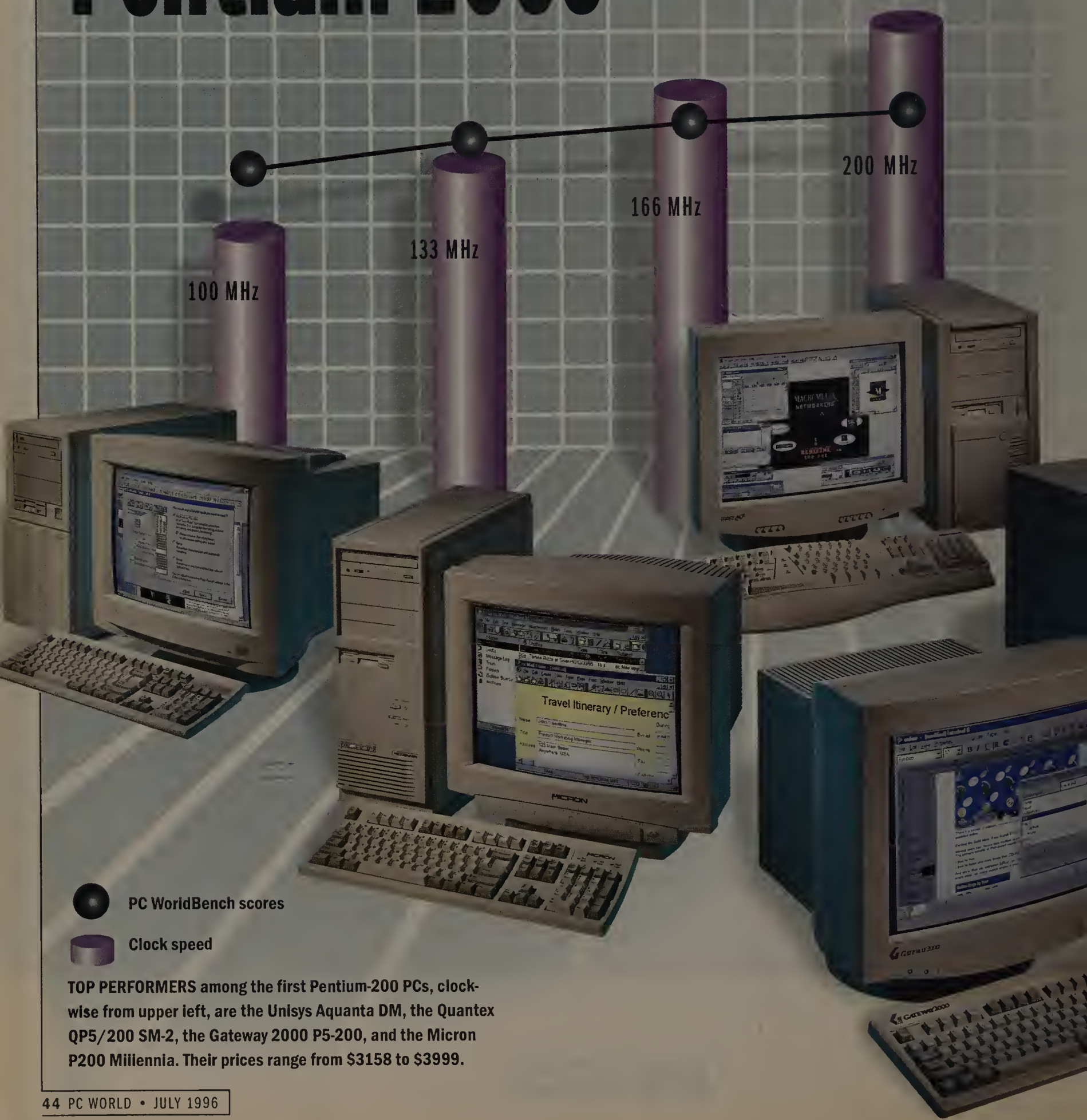
Helpful hint:

Rip out and pin up next to Compaq and IBM ads.

A little comparison shopping will quickly show you that HP puts the best prices on the most impressive PCs. One standout is the network-ready Vectra XM. It's configured for the most demanding networks with LAN Remote Power, Super-fast LAN install and HP Vectra Op-Center for more effective remote management. Every Vectra will outshine the competition when it comes to features and price. From the Pentium® processor-based PCs to the dual Pentium Pro processor-based HP Vectra XU PC. For more information or the name of your nearest HP reseller, call 1-800-322-HPPC, Ext. 1704.[†] Or visit us at http://www.hp.com/go/vectra.

HEWLETT® PACKARD

Pentium-200s FASTER BY A HAIR



TOP PERFORMERS among the first Pentium-200 PCs, clockwise from upper left, are the Unisys Aquanta DM, the Quantex QP5/200 SM-2, the Gateway 2000 P5-200, and the Micron P200 Millennia. Their prices range from $3158 to $3999.

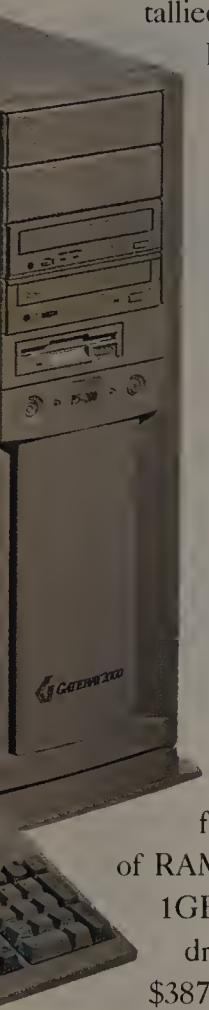
Edited by Andy Reinhardt and Randy Ross

Though Intel has pushed the Pentium chip to its outer limits, the first crop of 200-MHz Pentium PCs barely outrun Pentium-166s. Even so, they're great deals for high-end PCs.

TEST DRIVE

In microprocessor terms, the Pentium is geriatric. Intel keeps cranking out faster versions of the chip, but with each successive jump in the Pentium's clock speed, the rise in performance gets smaller and smaller. Witness the latest rollout, a 200-MHz version that will show up in desktop PCs midsummer: The chip's name shouts speed, but our tests reveal only a minor gain over Pentium-166s.

Still, these 200-MHz systems represent the top of the Pentium line, and the units we saw will be priced aggressively. Early Pentium-200 PCs turned in the best Windows 95 PC WorldBench scores we've ever tallied (except for 200-MHz Pentium Pro systems, which are still more expensive), yet typically cost only $150 to $200 more than similarly configured Pentium-166s. This represents a continuation of the price/performance trend vendors have been following for several years, offering faster systems with more storage and better peripherals without increasing prices. What's interesting here is that the introductory prices for the new Pentium-200 systems are even lower than those we saw for less richly configured Pentium-166s that debuted in January. For example, the 166-MHz system from Dell last winter had 16MB of RAM, 512K of secondary cache, a 1GB hard drive, a 6X CD-ROM drive, and a 28.8-kbps modem for $3879. The new 200-MHz Dell PC has the same RAM and cache configurations, plus a 2.5GB hard drive and an 8X CD-ROM drive for only $3429. The moral of this story: Look beyond processor speeds and consider the total package when shopping for a high-end PC.



Incremental Improvements

Our tests of preproduction models from six PC vendors show minor speed gains of 2 to 6 percent over comparably equipped 166-MHz Pentium PCs. This is significantly less than the 20 percent difference in the clock speeds of the CPUs—and less than the 10 to 15 percent advantage for the Pentium-200 predicted by Intel. When we stacked up a 200-MHz Pentium against comparably configured 200-MHz Pentium Pro systems, the Pentium was about 7 percent slower overall in our Windows 95–based PC WorldBench test suite.

Why such minimal improvements? The culprit is the system bus—the pathway between the CPU and other components. While the Pentium's internal processing speed has skyrocketed from 60 and 66 MHz at its introduction three years ago to 200 MHz today, the speed of the system bus has stayed the same. P-90, P-120, and P-150 computers use a 60-MHz system bus, and P-100, P-133, P-166, and P-200 PCs use the faster 66-MHz bus.

Higher clock speeds allow Pentiums to process instructions faster and to access their small internal caches more quickly, but even the fastest Pentiums cross the same 60- or 66-MHz bus to use secondary cache or system memory. That's why, for the last few Pentium iterations, we've seen diminishing gains in performance with each rise in the internal processing speed.

Breaking News

INTERNET APOCALYPSE? A Gartner Group analyst has added his name to the list of doomsayers predicting that the increasing traffic on the Internet could hobble its performance and decrease reliability. Gartner's Doug Cayne points to periodic brownouts and prolonged breaks in service as problems already affecting the Net's busier neighborhoods. Moreover, the population on the Internet is supposed to triple in the next few years, causing "a backbone meltdown," he says. Cayne predicts that the Net will survive through continual rebuilding by service providers, though not without significant downtime and loss of productivity. —R. O.

A MEMORY UTILITY THAT WORKS: It's been a bad year for Win 95 memory utilities: Syncronys Softcorp's SoftRAM95 promised to double PC memory but actually slowed performance—and was eventually recalled by the vendor (*Breaking News*, March). But we're impressed with preliminary lab tests of Helix Software's $80 Hurricane for Windows 95. On an 8MB Win 95 system, a beta copy boosted performance on the PC WorldBench benchmark by up to 10 percent on individual apps compared to the same PC without Hurricane. It produced larger gains when six apps were loaded. While Hurricane does help performance, it can't make a PC with 8MB perform like one with 16MB. —L. M.

(continued on page 47)

PHOTOS: JOHN GREENLEIGH; ILLUSTRATION, ABOVE: JEFFREY PELO

Many industry watchers believe the Pentium-200 is a natural-born underachiever. "The incremental performance increase of the P-200 over the P-166 is not going to be that significant," says Linley Gwennap, editor in chief of *Microprocessor Report* in Mountain View, California. "It's the same old Pentium running a little faster."

High-End Home PC

Although the newest, fastest PCs are typically bought by power users who'll pay top dollar for breakneck speed, Intel's Pentium-200 marketing initially will target home computer buyers. Why? The company is now pushing the Pentium Pro as the mainstream business choice and aiming regular Pentiums at home users, says Frank Spindler, Intel's Pentium processor marketing manager.

P-200s aren't cheap. Gateway's P5-200 is $3999 with a 2.5GB hard drive, a Matrox 2MB WRAM graphics card, a 17-inch monitor, a 28.8-kbps modem, and a CD-Recordable drive. This adds up to a $151 premium over a comparably configured P-166 and $265 more than a P-133, for 5 percent and 10 percent faster performance, respectively. Gateway expects P-200s to appeal to high-end buyers, so it's bundling a CD-R drive—and later, videoconferencing—into all models.

POWER MIX: Dell's Dimension XPS P200s (right) matched the Gateway's speed but costs less. Hewlett-Packard's Vectra VL4 5/200 MT (left) was the slowest.

For $700 less, Quantex's $3299 QP5/200 SM-2 matches the Gateway P5-200 feature for feature except that it sports 16MB more RAM and a Number Nine Imagine128 graphics card with 4MB of VRAM. While the Quantex was the fastest among the six P-200s, its score was only 3.3 percent better than that of the speediest comparable P-166 we've reviewed. (The QP5/200's 32MB of RAM and 512K secondary cache also gave it an advantage in our tests over P-200s with lesser configurations.)

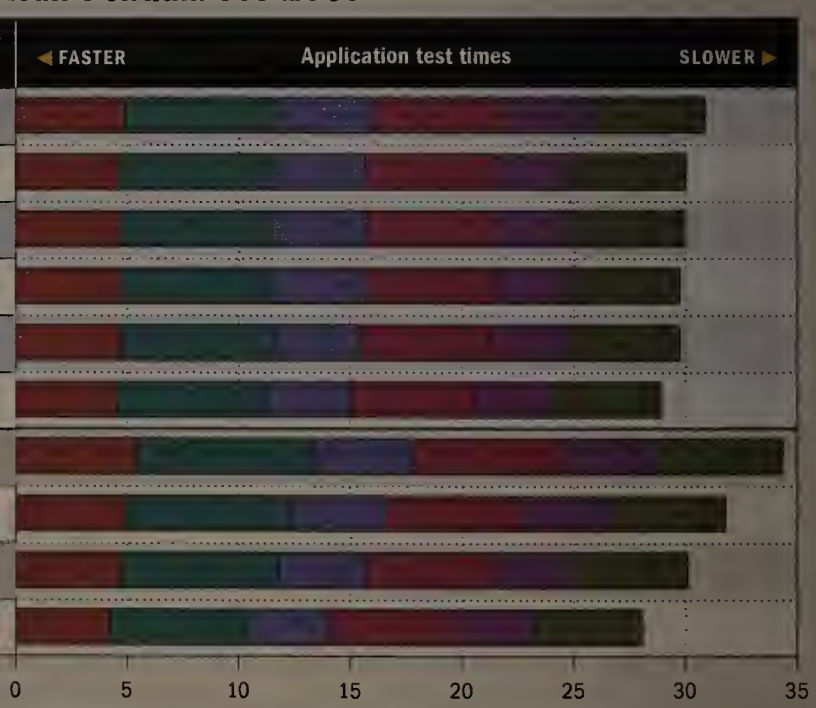
Like Gateway's P5-200, Dell's Dimension XPS P200s ran about 5 percent faster than comparable P-166s. Priced at $3429, the P200s comes with a 2.5GB hard drive, an Imagine/II video card with 4MB of VRAM, a 17-inch monitor, a 28.8-kbps modem, and an 8X CD-ROM drive. Micron's P200 Millennia provides a 2.5GB hard drive, an 8X CD-ROM, a Diamond Stealth 3-D 2000 graphics board with 2MB of RAM, and a 17-inch monitor for $3158.

Hewlett-Packard's Vectra VL4 5/200 MT is priced at $3650 and includes a 1.6GB hard drive, a Matrox MGA Millennium graphics card with 2MB of WRAM, and a 4X CD-ROM drive (it'll have an 8X drive by fall, HP says). The monitor isn't included in this price; with an $800 17-inch display the cost would be $4450. The HP sys-

TEST REPORT

Pentium-200 PCs Eke Out Tiny Gains Over P-166s but Trail Pentium Pro-200s

▼ PC WorldBench score		CPU	RAM (MB)	Secondary cache (K)
201	HP Vectra VL4 5/200 MT	Pentium-200	16	256
208	Dell Dimension XPS P200s	Pentium-200	16	512
208	Gateway 2000 P5-200	Pentium-200	16	512
210	Micron P200 Millennia	Pentium-200	16	512
210	Unisys Aquanta DM	Pentium-200	32	256
216	Quantex QP5/200 SM-2	Pentium-200	32	512
182	Average of 30 P-133 PCs	Pentium-133	16	256
196	Average of 19 P-166 PCs	Pentium-166	16	256
208	Average of 2 P-166 PCs	Pentium-166	32	512
225	Average of 4 PPro-200 PCs	Pentium Pro-200	32	256



Word 7.0 | Excel 7.0 | Picture Publisher 6.0 | Paradox 5.0 for Windows | WordPerfect 6.1 for Windows | 1-2-3 release 5 for Windows

Methodology Higher PC WorldBench scores are better. For a description of the PC WorldBench 1.0 tests, see the Test Report in this month's system review.

Data based on PC WorldBench testing conducted by the PC World Test Center.
All rights reserved.

In the Pipeline

Intel knows the current Pentium design is running out of steam. That's why the company is developing two new processors that fall somewhere between the Pentium and the Pentium Pro in performance. The upcoming P55C and Klamath CPUs will target mainstream business and home PC users.

The P55C, slated for release by the end of the year, is a souped-up Pentium with a larger internal cache (Intel won't say how large). The bigger cache should reduce the performance hit from system bus bottlenecks by letting more work occur within the high-speed core of the processor. The P55C also includes Intel's MMX extensions, a series of instructions that improve performance of multimedia applications. Intel says P55C-based PCs probably will be widely available by early 1997.

Also slated for 1997 is a Pentium Pro variant, code-named Klamath and sometimes called Pentium Pro Lite. Analysts say Klamath is a scaled-down Pentium Pro without the built-in secondary cache. This change would reduce manufacturing costs and make Pentium Pro-based systems more affordable—but also slower.

Meanwhile, don't take your eyes off Cyrix, which plans a 150-MHz 6x86 chip that will run on a zippy 75-MHz bus the company is developing with PC vendors.

tem was roughly 2 percent faster than similarly equipped P-166s. Rounding out our P-200 preview is the Unisys Aquanta DM, which squeaked by comparable P-166s by 2 percent. Priced at $3995, the Unisys system includes a 1.6GB hard drive, a 4X CD-ROM drive, a Number Nine Vision 330 video card with 2MB of DRAM, and a 17-inch monitor.

Prices to Drop

Although current Pentium-200 systems might be a tad pricey for the majority of home and small-business buyers, prices are expected to drop soon. According to Intel's Spindler, today's $3000-plus P-200s should fall to about $2500 later this year.

Some power users, particularly those running Windows 95, may opt for the P-200 to squeeze a bit more performance out of compute-intensive applications such as spreadsheets and computer-aided design. But mainstream business users should consider all the CPU options available, including Pentium Pros and Pentium-class chips from Intel competitors AMD and Cyrix. Considering how close the performance of P-200s is to that of P-133 and P-166 systems, you should pay more attention to prices and configurations than to clock speeds when shopping for a new PC.

—Jeff Bertolucci

Dell Dimension XPS P200s

Dell Computer, 800/613-3355
Pricing: From $3429
Reader service no. 835

Gateway 2000 P5-200

Gateway 2000, 800/846-2000
Pricing: From $3999
Reader service no. 836

HP Vectra VL4 5/200 MT

Hewlett-Packard, 800/752-0900
Pricing: From $3650
Reader service no. 837

Micron P200 Millennia

Micron, 800/223-6571
Pricing: From $3158
Reader service no. 838

Quantex QP5/200 SM-2

Quantex Microsystems, 800/896-4898
Pricing: From $3299
Reader service no. 839

Unisys Aquanta DM

Unisys Corp., 408/434-2125
Pricing: From $3995
Reader service no. 840

Breaking News

(continued from page 45)

POWER MACS DO WINDOWS: A new Apple Power Macintosh system will run DOS, Windows 3.*x*, and Windows 95 applications through a built-in Pentium chip. The Power Mac 7200/120 PC Compatible, due to ship in June, includes a card with a 100-MHz Pentium processor and RAM on it. You'll be able to toggle between the Mac OS and Windows. The system will cost about $2799. If you've already got a Power Mac, you can add a PC Compatibility card sporting 8MB of RAM and a 100-MHz Pentium for $1049 or a 100-MHz Cyrix CPU for $799. —G. M.

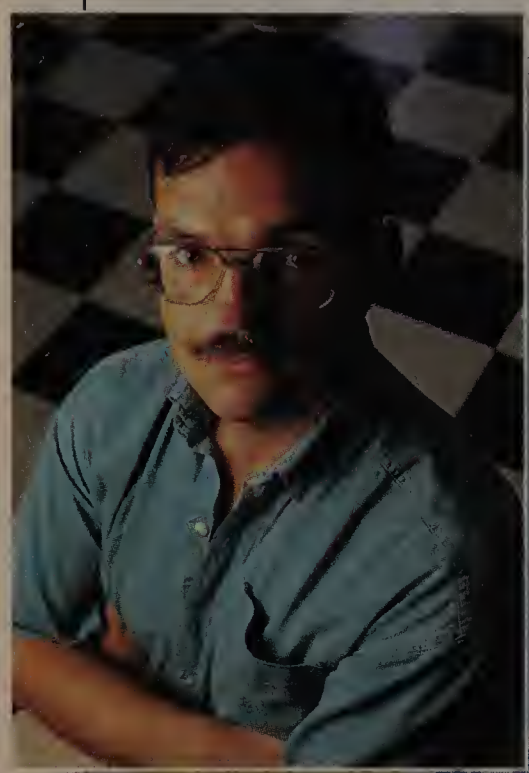
DIGITAL'S NEW SEARCH TOOLS: Digital Equipment Corporation plans to ship a new line of search products based on its speedy Alta Vista Web search technology. The first product, Alta Vista Search, will let you keyword search PC files and HTML documents on the Web or on your company's intranet. Two suites, Alta Vista Intranet Solution and Alta Vista Cyberworker Solution, should help companies implement and manage intranets and connect telecommuters and branch offices to them. Digital plans to ship the products later in the year; prices were unavailable at press time. —L. M.

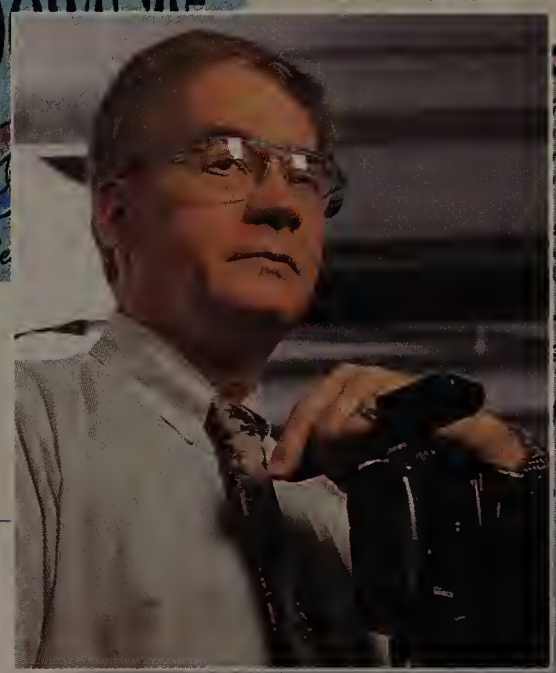
TIDBYTES: Gateway 2000 is selling systems directly from its Web site (http://www.gw2k.com). While other vendors offer information and a toll-

(continued on page 49)

JEFFREY PELO

RAM Scam!





RIPPED-OFF CUSTOMERS spurred PC World to investigate mail-order memory brokers. Clockwise from upper right: Morley Friedell, Howard Lower, and Andrew Thompson.

When Howard Lower bought an 8MB SIMM from Nevada Computer in April 1995, he thought he was getting a deal. But the $318 SIMM was defective, and when he called to get his money back, he was told the Boulder City, Nevada, mail-order firm had been sold. Lower, a photographer in Rochester, Minnesota, returned the SIMM to the firm's new owners and waited for his refund. It never came.

Last July Andrew Thompson, manager of a car dealership in Jacksonville, North Carolina, sold $400 worth of old SIMMs to Windows Memory Corporation, a memory broker in La Jolla, California. He delivered the RAM but never got any cash.

Last August Morley Friedell bought a Pentium-90 PC from Advanced Micro Solutions for only $1359. But when the Stevensville, Montana, retiree opened up his new system, he found a "disaster" of disconnected cables, defective drives, and missing parts. When Friedell tried to contact AMS, the Newport Beach, California, company was gone—and so was his money.

These are not your usual tales of mail-order distress. The difference? All the companies are linked by a common thread.

In the past year *PC World* has received nearly 40 complaints against five mail-order memory brokers in Southern California and Nevada alleging that the companies accepted payment or trade-ins and delivered defective products—or nothing at all. All five firms have now gone under, leaving banks, suppliers, and customers in the lurch. And all these firms can be traced back to one man: Don Royal Smith.

For years, Smith and his associates have operated businesses that walk a fine line between poor management and outright fraud. The total losses will likely never be known, but four of the five firms left unsecured debt totaling well over $1 million.

"These guys just have no scruples whatsoever," says a former business associate, who asked to remain anonymous. "Their attitude is, 'If you're dumb enough to let us screw you over, it's your problem.' "

The story is far from over. Smith is now under investigation by the U.S. Secret Ser-

PHOTOS, CLOCKWISE FROM UPPER RIGHT: GEOFF MANASSE, STEVE WOIT, DONNA BISE

vice, and *PC World* has uncovered several new mail-order firms being operated by Smith, his family, and former employees.

Modus Operandi

All the firms linked to Smith follow similar patterns. They take out ads in computer magazines (including *PC World*), buy supplies, and set up shop. Some people receive products as promised, but others aren't so lucky. When customers turn up the heat, the firms relocate, change their names, switch owners, or shut down. Sometimes the new owners are the same people using various aliases. Then the cycle begins all over again.

Rolphe Reinhart, a retired physician in Fountain Valley, California, got caught in one of these cycles back in August 1994, when he purchased 192MB of RAM from California Memories Plus. According to Reinhart, employees at the Tustin, California–based company insisted that he pay by check. After repeated efforts to obtain his memory, months later Reinhart still didn't have the SIMMs he'd paid for.

When Reinhart went to the company's headquarters in November 1994 to resolve the situation, he found the office cleared of furniture and the electricity turned off. Reinhart says owner Marty Shappard told him the firm had been purchased by Sunwest Micro of Las Vegas.

PC World was unable to verify the sale to Sunwest Micro or locate its alleged owner, William Dillstrom. In April 1995 California Memories Plus filed bankruptcy, with over $400,000 of debt. Marty Shappard had moved to Nevada, and Reinhart—one of seven *PC World* readers burned by the company—was out more than $13,000. (*PC World* is also listed as an unsecured creditor in the bankruptcy proceeding.) Records show that Sunwest closed in October 1995.

The person posing as Marty Shappard was Don Royal Smith. A handwriting analyst hired by *PC World* examined several public filings signed by Shappard and Smith and concluded the writing was from the same person. The Secret Service has also confirmed the alias, but refused to disclose further details about its inquiry.

When *PC World* tried to reach Smith for comment, we were called by attorney Daniel Casas of Orange, California, who said he advised Smith not to speak with *PC World*. "California Memories Plus did millions of dollars of business," Casas says. "Six or seven complaints is not a large number for that volume of business."

California Memories Plus went out of business, but Smith didn't. In September 1994 he started a new firm in Boulder City, Nevada, called Z-Memory Experts. *PC World* has not received any complaints against the company.

PC World has received nearly 40 complaints against mail-order firms that all trace back to Don Royal Smith.

However, Detective Robert Baughman of the Boulder City police says ten consumers have filed complaints with his office against Z-Memory alleging that it issued bad checks or failed to pay for memory. These people have lost a total of at least $20,000 to Z-Memory, the detective estimates.

Baughman says criminal charges have not been filed against Smith because he is "paying back his victims little by little" through the district attorney's bad-check unit. But, Baughman adds, by manipulating the legal process, Smith is "making fools of me and the DA's office."

Like Father, Like Sons

Smith and his associates typically buy companies with solid reputations, transfer control of the firms between family members, and use front people to disguise ownership. The story of Nevada Computer and Pacific Coast Micro is a classic case.

In May 1995 Donald Piper ordered $510 worth of RAM from Nevada Computer.

Breaking News

(continued from page 47)

free number, Gateway lets you specify a custom configuration on the site, then order the PC with a credit card... MSN on the Net: For $6.95 a month or $39.95 a year, you can access the content of the Microsoft Network through any dial-up Internet service provider you choose. The $39.95 offer expires August 31...Cradle-to-Grave E-Mail: A new service from USA.Net called NetAddress provides you with an e-mail address that will follow you anywhere in the world. The firm sets up a virtual post office apart from your Internet service provider, so no matter how often you change ISPs, your address stays the same. USA.Net will forward mail to a personal or work account and will even screen your messages. Prices range from $18 to $36 a year...Internet Tax on Hold: The Internet community in Florida has managed to fight off a proposed Internet usage tax—for now. The state legislature passed a bill in early May that would delay for a year the Department of Revenue's planned 7 percent levy on Net services while an appointed commission further studies the issue ...Scanner Price Breakthrough: Plustek USA is selling a new 24-bit color flatbed scanner with 300-to-600-dpi resolution for only $370, including a bundled OCR package and image editing software. At that price, the OpticPro 4800P makes photo-quality scanners nearly as affordable as monochrome models.

JEFFREY PELO

The memory never arrived, but Piper's credit card bill showed a charge to Pacific Coast Micro in San Diego. When Piper phoned PCM, an employee said the firm was handling Nevada's credit card sales, but denied any further affiliation and refused responsibility for Piper's order.

Piper, a music teacher in Kendalia, Texas, was shuttled between the two companies for six weeks. Each time he called, he was given the same series of excuses. Then, sometime in the fall of 1995, both firms shut down. Confidential sources say PCM left debts of more than $500,000.

Because Piper ordered by credit card, he didn't lose any money. But he wasn't the only victim: From January through November 1995, *PC World* received nine similar complaints against Nevada and PCM.

The links between these two companies are shrouded in confusion and contradiction. Nevada's founder, Kirk Frantz, says he sold his company to Pacific Coast Micro in May 1995. Public records list PCM's owner as Craig Johnson of San Diego. (*PC World* was unable to locate Johnson for comment.) But independent sources say the company was actually operated by Don Smith Jr., who used the alias Jack Smith to avoid being associated with his more famous father.

Don Smith Jr. denies any ownership interest in PCM and claims he purchased Nevada Computer himself, operating it as a separate business entity until it went under. Smith Jr. does admit that PCM helped Nevada handle some of its credit card transactions before both firms failed. "I never intended to defraud or hurt anyone," Smith Jr. says. "My problem is that I was undercapitalized."

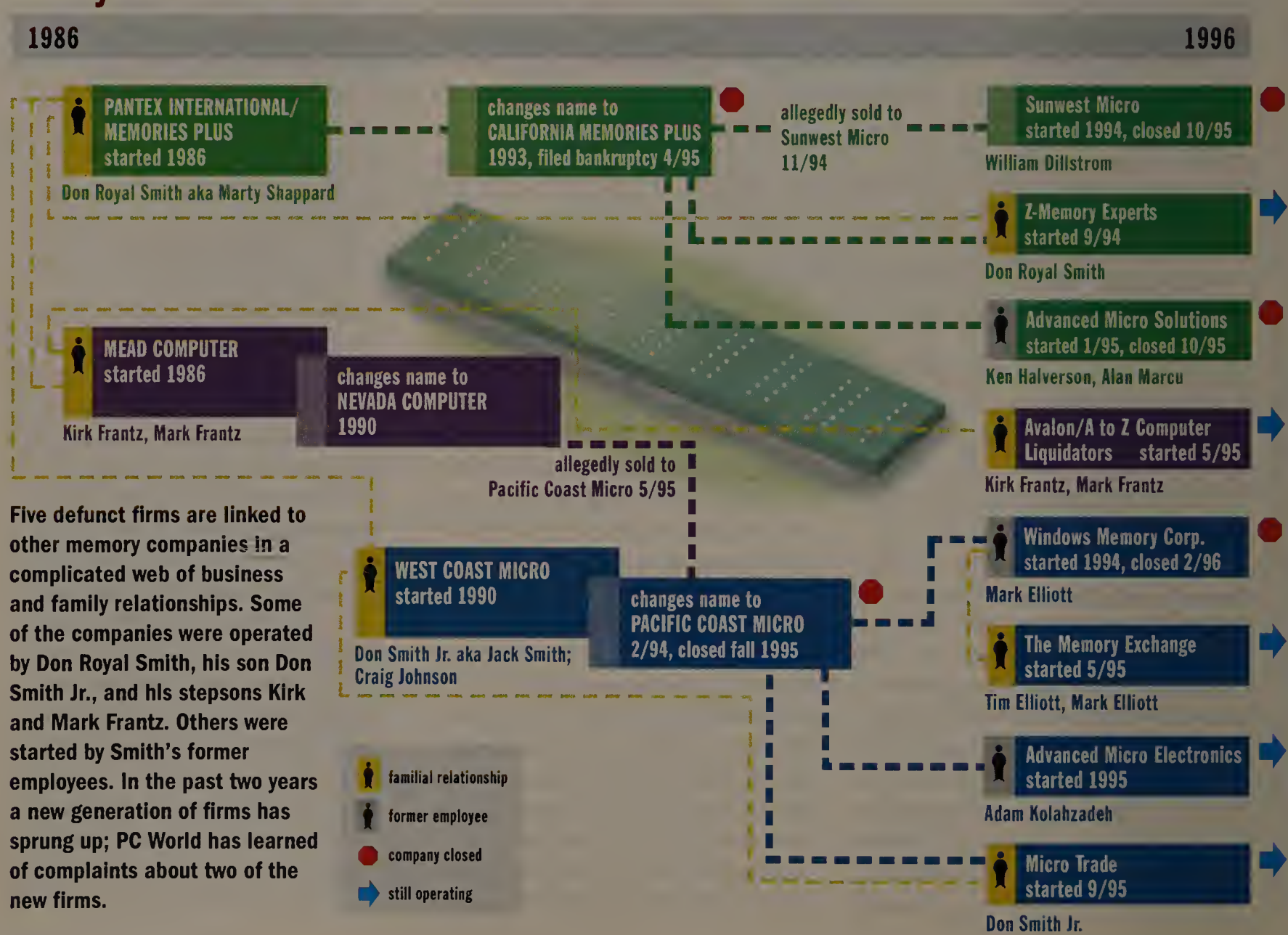
But readers report that the same employees answered the phone at both companies. And the connections run even deeper. Several sources—including Don Smith Jr.—say that Kirk Frantz is Don Royal Smith's stepson. Frantz, however, denies any familial ties to the Smiths.

The Next Generation

Two of the failed firms *PC World* investigated were run by former employees of the Smiths, though we found no financial links between the firms and Smith.

One of the shorter-lived spin-offs was Advanced Micro Solutions, owned by Ken "Boomer" Halverson and Alan Marcu,

Family Ties: RAM Brokers Share More Than Same M.O.



Five defunct firms are linked to other memory companies in a complicated web of business and family relationships. Some of the companies were operated by Don Royal Smith, his son Don Smith Jr., and his stepsons Kirk and Mark Frantz. Others were started by Smith's former employees. In the past two years a new generation of firms has sprung up; PC World has learned of complaints about two of the new firms.

both of whom worked at California Memories Plus. From January to October 1995, AMS sold systems, hard drives, and other components, as well as memory. During those ten months, *PC World* received 14 complaints about the firm.

Sources inside the company detail a variety of questionable practices at AMS, alleging that it mishandled funds and sold used and defective parts as new.

Owner Ken Halverson says that he "had no intent to defraud anybody. I [just] made some very bad business decisions." Halverson blames shipping problems for complaints about damaged goods, but admits that some customer orders may have slipped through the cracks when the company was going under.

Halverson says AMS owed $330,000 when it failed. "If I won the lottery, I'd give [people] their money back," he says. "But there are a lot of disappointments in life."

Pacific Coast Micro also produced its own spin-offs. In September 1995 *PC World* received the first of nine complaints against Windows Memory Corporation of La Jolla. The company was owned by Mark Elliott, a former PCM employee.

Mark Nadasdi, a systems engineer in New York City, sent 73MB of SIMMs worth $1703 to Windows Memory but never got any money back. "They've never returned a call," he says. "I'd speak with the same people, but they'd give me different names."

Windows Memory Corporation closed in February 1996, leaving a trail of unhappy customers and, according to Elliott, outstanding debts of $150,000. "I'm not the kind of person to rip anyone off," he says. "I'm very committed to getting my debts paid off."

Consumers who are owed money by Windows Memory should contact the company's attorney, Mitchell Sussman of Palm Springs, California, at 619/325-7191.

The Dons of Mail Order

The Smiths' influence on the mail-order memory industry can't be denied. An associate estimates Don Royal Smith alone has started "24 or 25 companies" in the last 15 years. "These guys are the godfathers of the industry," says an executive who's done business with several of the firms. "They are *everywhere*."

"These guys are the godfathers of the industry," says a source. "They are *everywhere*."

As a result, some companies with good reputations also trace their roots back to Smith. One such company is First Source of Aliso Viejo, California. Two of its three founders worked at the now-defunct Unitex in the late eighties, where Don Royal Smith was general manager. In 1990 the partners branched off to start First Source. Last year it reached $65 million in sales and began selling a wider range of computer components. *PC World* has not received any complaints against First Source.

Other active companies also link back to the Smiths. Although many are owned or operated by people involved in the five defunct firms, we have not found evidence of fraudulent or sloppy business practices.

Don Smith Jr. now owns and operates Micro Trade in San Diego. The Better Business Bureau of San Diego gives the firm a satisfactory rating. Kirk Frantz's brother Mark owns Avalon Micro and the related A to Z Computer Liquidators, both in Boulder City; Kirk is a principal. And Mark Elliott joined his brother Tim at The Memory Exchange in San Diego after Windows Memory folded in February. At press time *PC World* had not received any complaints against these companies. When we bought RAM covertly from Avalon and Memory Exchange it arrived with no delay.

A reader complaint pointed us to Advanced Micro Electronics in San Diego. Insiders say owner Adam Kolahzadeh is a former employee of Pacific Coast Micro, but Kolahzadeh vehemently denies any connection to the Smiths or to the similarly named Advanced Micro Solutions.

Skirting the Law

Consumer fraud is hard to prove. Postal Inspector Tom Taylor in San Francisco says authorities must "show specific intent to defraud" through a trail of evidence like inventory records, receipts, and tax returns. When firms move often, change names, or are purchased, the paper trail gets harder to follow. Local or state agencies can pursue the case only within their own jurisdiction. And without a large number of complaints, local authorities are unlikely to forward problems to federal agencies that can pursue large-scale investigations.

When a firm ships some of its orders and honors at least some of its promises, the "good faith" of its proprietors is hard to determine. Authorities may give firms the benefit of the doubt—which can give fraudulent operators time to disappear and pop up elsewhere. (For tips on protecting yourself, see this month's *Consumer Watch*.)

Despite the risks, a surprising number of consumers who've been burned say they'll continue to buy products through the mail. But these days, says music teacher Piper, "I'm a lot more careful."

—Angela Freeman and Daniel Tynan
with additional reporting by Christina Wood

If You've Been Burned

Here's how to fight back. Call your local police and contact the following:

***PC World* Consumer Watch**
501 Second St. #600
San Francisco, CA 94107
pcwcwatch@aol.com

U.S. Postal Inspection Service
Fraud Complaint Section
222 S. Riverside Plaza #1250
Chicago, IL 60606

Direct Marketing Association
Consumer Complaints Mail Order Action Line
1111 19th St. NW #1100
Washington, DC 20036

O'Hare Airport: 4.3 miles of terminals.

Dallas/Ft. Worth: 4.8 miles.

Denver International: 3.2 miles.

(It occurred to us you might want a lighter notebook.)

intel inside pentium PROCESSOR

Designed for Microsoft® Windows®95

Of course, it also occurred to us that you don't want to lose features while losing weight. Thus, the new AcerNote™ Light notebook computer offers a Pentium® processor, full-size keyboard and large 10.4" color screen.

But it still weighs just 5.8 pounds. Which we think you'll appreciate when you're traveling from, say, Dallas to New York. Half the distance of which is covered while walking to the gate. ACER®

AcerNote Light
100MHz Pentium Processor

- 10.4" Dual Scan Color Display
- 8MB EDO RAM (40MB Max)
- 810MB Hard Drive
- 5.8 Pounds
- Duracell® NiMH Battery
- 1MB Video DRAM
- 2 Type II/1 Type III PCMCIA Slots
- Large Full-Size Keyboard
- 16-bit Sound Blaster™ Compatible Audio
- Touchpad with Ergonomic Palmrest
- 3-Year Limited Warranty/ 1-Year Rapid Repair
- *Double your RAM to 16MB for only $299*

$1999

TO ORDER, CALL 1-800-574-ACER
6am-6pm Weekdays, 8am-4pm Saturday Pacific Time

(It also occurred to us you might want other options.)

AcerNote Light
100MHz Pentium Processor

- 10.4" Active Matrix Color Display
- 16MB RAM (40MB Max)
- 810MB Hard Drive
- 5.8 Pounds
- Duracell® NiMH Battery
- 1MB Video DRAM
- 2 Type II/1 Type III PCMCIA Slots
- Large Full-Size Keyboard
- 16-bit Sound Blaster™ Compatible Audio
- Touchpad with Ergonomic Palmrest
- 3-Year Limited Warranty/ 1-Year Rapid Repair

$2499

AcerNote Pro
120MHz Pentium Processor

- 10.4" Active Matrix Color Display
- 16MB RAM (40MB Max)
- 1GB Hard Drive
- 256KB L2 Cache
- 6.5 Pounds
- Dual Battery Operation ***(Second Battery Free with Purchase)***
- 1MB Video DRAM
- 2 Type II/1 Type III PCMCIA Slots
- 16-bit Sound Blaster™ Compatible Audio
- Touchpad with Ergonomic Palmrest
- 3-Year Limited Warranty/ 1-Year Rapid Repair

$2999

AcerNote Pro
120MHz Pentium Processor

- 10.4" Active Matrix Color Display
- 24MB RAM (40MB Max)
- 1GB Hard Drive
- 256KB L2 Cache
- 6.5 Pounds
- Dual Battery Operation ***(Second Battery Free with Purchase)***
- 1MB Video DRAM
- 2 Type II/1 Type III PCMCIA Slots
- 16-bit Sound Blaster™ Compatible Audio
- Touchpad with Ergonomic Palmrest
- 3-Year Limited Warranty/ 1-Year Rapid Repair
- ***28.8 Modem Included***

$3499

AcerNote Pro
120MHz Pentium Processor

- 10.4" Active Matrix Color Display
- 40MB RAM (40MB Max)
- 1GB Hard Drive
- 256KB L2 Cache
- 6.5 Pounds
- Dual Battery Operation ***(Second Battery Free with Purchase)***
- 1MB Video DRAM
- 2 Type II/1 Type III PCMCIA Slots
- 16-bit Sound Blaster™ Compatible Audio
- Touchpad with Ergonomic Palmrest
- 3-Year Limited Warranty/ 1-Year Rapid Repair
- ***28.8 Modem Included***

$3999

AcerDock™
Docking Station

- 200-Watt Power Supply
- Quad-Speed CD-ROM Drive
- 2-button Mouse
- Stand-alone Speakers
- Standard Keyboard
- 3 ISA Expansion Ports/ 3 Storage Bays
- Removable Cover for External CRT
- Built-in Battery Charger Bay

$799

ACER®

intel inside pentium PROCESSOR

Designed for Microsoft® Windows®95

TO ORDER, CALL 1-800-574-ACER

6am-6pm Weekdays, 8am-4pm Saturday Pacific Time

Please call 1-800-574-ACER for details on the limited warranty. Return shipping and insurance charges are the responsibility of the customer. Not available outside U.S. Products, availability, prices and programs are subject to change or cancellation without notice. Shipping and handling charges are extra. Acer and the Acer logo are registered trademarks and AcerDock and AcerNote are trademarks of Acer America Corporation and Acer Inc. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. All other brands and product names are trademarks or registered trademarks of their respective companies. © 1996 Acer America Corporation.

Windows NT 4.0 Moves Closer to Mainstream

Microsoft's road map for Windows 95 and Windows NT shows the two operating systems drawing closer together in the near future. Microsoft aims to ship the next version of NT this summer, but has no plans for a Windows 96. Rather, the company will release a series of minor upgrades and add-ons for Windows 95 this year that add up to a sort of Windows 96 junior. The next major update of Win 95, code-named Memphis, won't appear until 1997 or early 1998.

Although the new 4.0 release of NT gains Windows 95's user interface, it will likely remain a high-end choice. It still requires more system resources and supports fewer hardware options. The latest revelation from Microsoft is that NT 4.0 won't install cleanly on top of existing Win 95 setups: Migration will require reinstalling applications and recreating preferences and desktop settings.

ALL-IN-ONE EXPLORER with PageView shows Internet data and local files on the same tree.

Increments for 95; a New Look for NT

The next step for Windows 95 is a code update set for release to PC makers this summer. It will include the 3.0 release of Internet Explorer and a new 32-bit version of the File Allocation Table file system that supports larger drives and uses disk space more efficiently. FAT32 will be made available at no cost to end users shortly afterward.

In the fall Microsoft plans a retail add-on (along the lines of the Plus pack) that contains a revamped Explorer, a new personal information manager, and Internet Explorer 3.0. Explorer's new PageView mode lets you use a single interface to browse files stored on your PC and LAN as well as on the Net.

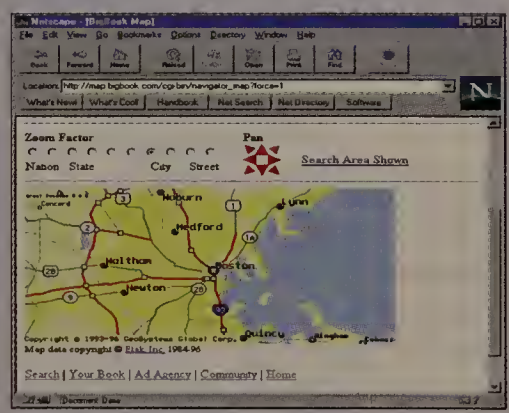
The 4.0 release of Microsoft's high-end Windows NT operating system marries Win 95's ease of use to NT's security, stability, and support for multiprocessing and non-Intel-compatible CPUs. Microsoft says the NT kernel has been extensively rewritten to improve performance and curb memory requirements. We didn't receive a copy of the latest beta in time to test it.

Some of the special programming interfaces supported by Windows 95 finally migrate to NT in the 4.0 release, but others haven't yet made the leap. NT 4.0 has the DirectX graphics and multimedia APIs and the TAPI telephony interface, which supports voice/data/fax applications. NT versions of the Direct3D API and the successor to the Video for Windows player, called ActiveMovie, will appear later in the year, Microsoft says. NT 4.0 is slated to include Explorer's new PageView mode. The new release also comes with an Exchange messaging client, but the Microsoft Fax portion of Exchange (familiar to Windows 95 users) is missing in action.

Unfortunately, NT 4.0 doesn't support Plug and Play technology for self-identification and self-configuration of system hardware; Microsoft says Plug and Play won't make it into NT until the "Cairo" release scheduled for late 1997 or early 1998. NT 4.0 also has fewer available drivers, so it doesn't work on the wide variety of PCs and peripherals supported by Win 95. This situation should improve when

The Web Browser Let Your Mouse Do the Walking

My 2-inch-thick *Pacific Bell Smart Yellow Pages* has 57,000 business listings. But the big book is starting to look small compared to massive white and yellow page sites popping up on the Internet. The reigning champs among online business directories are Yellow Pages Online (http://www.ypo.com/) and Nynex's BigYellow (http://s18.bigyellow.com/), each with upwards of 16 million listings. BigBook (http://www.bigbook.com/), which contains a mere 11 million entries, has a clever map tool that helps you find a business anywhere in the United States, even if you forgot its name. If you're looking for a person, the Four11 White Page Directory (http://www.four11.com/) contains 6.5 million e-mail addresses. (My defunct 3-year-old address is among them, however, so there's no freshness guarantee)...Yahoo borrows the Four11 listings for its People Search service (http://www.yahoo.com/search/people/phone.html), which lets you query from among 90 million addresses, phone numbers, and Web pages. Compared to my Pacific Bell directory, that's quite a phone book. —Richard Overton



FIND LOCAL BUSINESSES on the BigBook Web site by pointing to areas you want to search and then refining your query.

Microsoft ships a planned common device driver model for both flavors of Windows.

The future of NT is closely tied to networks. In a dramatic shift, Microsoft has moved away from its own proprietary technologies, such as NetBEUI and the WINS domain-name protocol, in favor of Internet standards such as TCP/IP and DNS. (The old protocols will still be supported for backward compatibility.) Both the workstation and server versions of NT 4.0 include bundled Web authoring tools; the server edition also ships with Microsoft's graphical Internet Information Server.

Installation Gap

Microsoft admits to a serious weakness in Windows NT 4.0: When installed onto a Windows 95 PC, it won't inherit the previous operating system's applications, user preferences, and desktop settings. So you have to put NT into a different directory and then reinstall your apps from scratch. "It's a travesty," says none other than Jim Allchin, senior vice president of Microsoft's desktop and business systems division.

WINDOWS NT AND 95 ROAD MAP

	Summer 1996	Fall 1996	Winter 1996 to 1997	Winter 1997 to 1998
Windows NT	Windows NT 4.0 Windows 95 user interface Explorer with PageView DirectX and TAPI Exchange messaging client Web authoring			Cairo object-oriented file system Plug and Play power management Windows driver model clean install over Windows 95
Windows 95	OEM refresh driver updates bug fixes FAT32 Internet Explorer 3.0	Internet add-on Internet Explorer 3.0 Explorer with PageView Web authoring Athena PIM	Service Pack 2 Windows driver model bug fixes	Memphis improved graphics engine object-oriented file system

The problem stems from differences between the Registries in Windows NT and 95. Although both operating systems can run the same 32-bit programs, many programs execute different code (such as alternate .dll files) or install themselves differently depending on which Windows is in use. Since Microsoft couldn't make migrating from 95 to NT a seamless process, Allchin says, it decided against a half-baked solution. The version of NT that follows 4.0 will install cleanly over Win 95 systems, he says. Excusing the problem with mock humility, he quips: "Yes, we're incompetent, but it's the right thing to do."

—Scott Spanbauer

Bug Watch Windows 95's Slow Memory Leak; Symantec Patchwork

Microsoft Darns Hole in Windows 95 Winsock

▶ **Bug:** Running Web browsers, e-mail programs, and other apps that use Windows sockets to communicate over the Internet for several hours at a time can gradually decrease available system memory, slowing down your Win 95 system or even causing it to crash. This memory leak becomes worse if programs open and close multiple winsock connections.

▶ **Fix:** A patch to the Windows 95 kernel corrects the winsock problem. You can download krnlupd.exe from Microsoft's Web site (http://www.microsoft.com/windows/software/krnlupd.htm).

In Brief: A Trio of Fixes for Symantec Products

▶ **Norton Navigator 95.0.b.** Symantec's second patch for Norton Navigator (see January's *Bug Watch* for the first) further speeds launching and file operations, integrates the QuickView file viewer into Norton File Manager, and makes FileAssist work with Microsoft Office 95. You'll find separate patches for both the 1.0 version of Norton Navigator (1-to-95b.exe) and the later 95.0.a (a-to-95b.exe) on Symantec's FTP server (ftp://ftp.symantec.com/public/win95_nt/navigatr/) and BBS (541/484-6669), and on CompuServe (go symantec) and AOL (keyword symantec).

▶ **pcAnywhere32 update.** This patch should speed up 16-bit apps running remotely under Win 95. It also eliminates an amazing bug in early versions of pcAnywhere32 under Windows NT: If you launched the program inst32.exe, every file on your hard drive would be erased. (Don't try this at home—take our word for it.) Find the upgrade, 70up_a.exe, on Symantec's FTP server (ftp://ftp.symantec.com/public/win95_nt/PCA32/) and on CompuServe and AOL.

▶ **Winfax Pro 7.02.** An updated version of Symantec's (formerly Delrina's) fax software boosts speed and fixes glitches, including system freezes when faxing from certain applications and problems reading phone books and fax archives made with previous versions. You can download the patch in three files (wf702d1.exe, wf702d2.exe, and wf702d3.exe), totaling more than 3MB, from the Symantec/Delrina group FTP server (ftp://ftp.delrina.com/pub/patches/windows95/winfaxpro70/), or from CompuServe or AOL. —Scott Spanbauer

Found a hardware or software bug? Post your report on PC World Online or send us e-mail at bugwatch@pcworld.com.

Don't Miss
Our Incredibly
Low Prices!

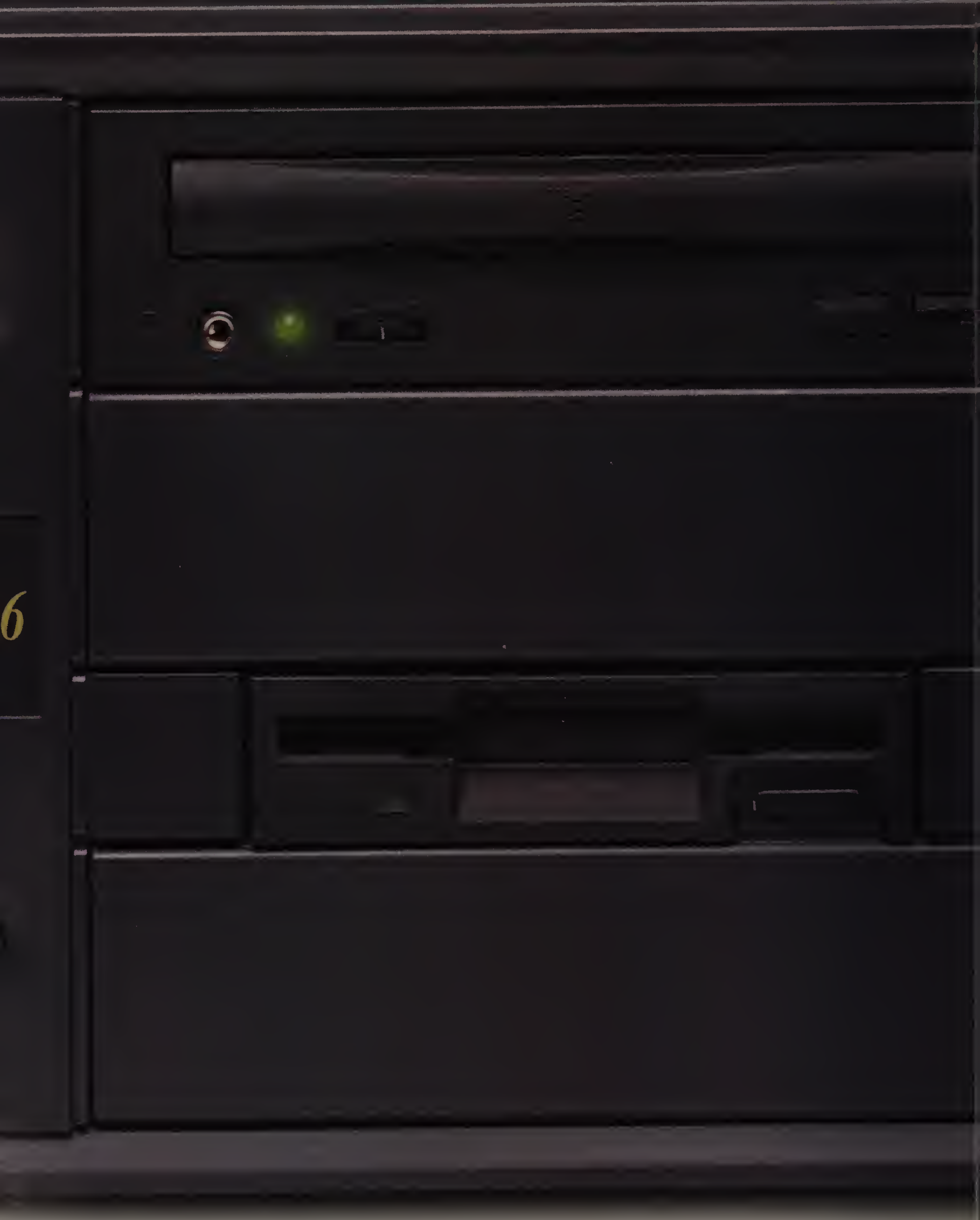
Only from South Dakota

(Prairie dog
shown actual size)

(Holstein cow
shown actual size)

The leader in desktops & portables
now brings you something big.

GATEWAY 2000
"You've got a friend in the business."®



Gateway 2000 has pioneered a whole new computer category that merges PC with TV.

We call it the Destination™ Big Screen PC, a group-computing, TV-viewing, multimedia-blasting, Internet-cruising mothers Or from anywhere else in the room thanks to the 31-inch monitor, wireless keyboard and Field Mouse™ remote control.

It's all part of Gateway's tradition of bringing value, service and technological leadership to customers first. To find out mo our whole family of desktop and portable PCs, give us a call. We'll give you the big picture.

GATEWAY 2000
DESTINATION

(Gateway's Destination Big Screen PC monitor
shown actual size)

ks great in fr f a couch.

the Destinati reen PC and

The Destin
We've char
Again.
Caps Lock
Shift
Alt

tion Big Screen PC.
ged the way you look at computers.

Call Toll Free! 888-888-1098

Multimedia Systems

P5-120 FAMILY PC™

- Intel® 120MHz Pentium® Processor
- 16MB EDO DRAM
- 850MB 10ms EIDE Hard Drive
- 1MB DRAM, 64-Bit PCI Graphics Accelerator
- 8X CD-ROM Drive/3.5" Diskette Drive
- 16-Bit Gateway Sound Card
- Altec™ Lansing ACS-40 Speakers
- TelePath® 28.8 Fax/Modem
- CrystalScan®15 .28dp Monitor (13.9" viewable)
- 7-Bay Mini Tower Case
- 104+ Keyboard & MS Mouse 2.0
- Microsoft® Windows® 95
- Generations II Software Collection

$1899

P5-166 FAMILY PC

- Intel 166MHz Pentium Processor
- 16MB EDO DRAM
- 256K Pipelined Burst Cache
- 2.5GB 11ms EIDE Hard Drive
- 2MB DRAM, 64-Bit PCI Graphics Accelerator
- 8X CD-ROM Drive/3.5" Diskette Drive
- 16-Bit Gateway Sound Card
- Altec Lansing ACS-40 Speakers
- TelePath 28.8 Fax/Modem
- Vivitron™17 .26dp Monitor (15.9" viewable)
- 7-Bay Mini Tower Case
- 104+ Keyboard & MS Mouse 2.0
- MS Windows 95
- Generations II Software Collection

$2699

P5-200XL

- Intel 200MHz Pentium Processor
- 16MB Synchronous DRAM
- 512K Pipelined Burst Cache
- 2.5GB 11ms EIDE Hard Drive
- Matrox® 2MB WRAM Graphics Accelerator
- CD-Recordable w/ SCSI Controller
- 8X CD-ROM Drive/3.5" Diskette Drive
- 16-Bit Ensoniq® Wavetable Sound Card
- Altec ACS-400 w/ ACS 250 Speaker System
- TelePath 28.8 Fax/Modem
- Vivitron17 .26dp Monitor (15.9" viewable)
- 12-Bay Tower Case
- 104+ Keyboard & MS Mouse 2.0
- MS Windows 95
- MS Office 95, Professional Edition*
- Generations II Software Collection

$3899

Generations II Software Collection

■ Microsoft Encarta® 96 ■ MS Cinemania '96 ■ MS Julia Child: Home Cooking with Master Chefs ■ MS Bob™ for Gateway 2000 ■ MS Works 95 ■ MS Publisher 95 ■ MS Money 4.0 ■ MS Golf 2.0 ■ MS Music Central™ 96 ■ MS CD Sampler ■ MS Entertainment Packs 1-4 (31 fun games!) ■ Ca$h Graf Home Office Plus™ ■ Mayo Clinic® Family Health Book ■ Mediamatics Arcade™ MPEG Player ■ The Masters®: Interactive Journey Through Its 60-Year History, for MPEG

The P5-200XL and D5-200 PCs have not been approved by the Federal Communications Commission. These devices are not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.

Destination™ Big Screen PCs *(Currently available for sale only in the U.S.)*

D5-120

■ P5-120 Family PC config above, excluding speakers, w/ Destination Big Screen PC upgrade (details next page) replacing standard corresponding components and software

$3499

D5-166

■ P5-166 Family PC config above, excluding speakers, w/ Destination Big Screen PC upgrade (details next page) replacing standard corresponding components and software

$3999

D5-200

■ P5-200XL System config above, excluding speakers, w/ Destination Big Screen PC upgrade (details next page) replacing standard corresponding components and software

$4899

NO PAYMENTS

Ask About Our "90 Days No Payment" Program!

Professional Systems

P5-100

- Intel 100MHz Pentium Processor
- 16MB EDO DRAM
- 850MB 10ms EIDE Hard Drive
- 1MB DRAM, 64-Bit PCI Graphics Accelerator
- 8X CD-ROM Drive/3.5" Diskette Drive
- Vivitron15 .26dp Monitor (13.9" viewable)
- 7-Bay Mini Tower Case
- 104+ Keyboard & MS Mouse 2.0
- MS Windows 95
- MS Office 95, Professional Edition*

$1649 Business Lease† $61/mo.

P5-133

- Intel 133MHz Pentium Processor
- 16MB EDO DRAM
- 256K Pipelined Burst Cache
- 1.6GB 9ms EIDE Hard Drive
- 2MB DRAM, 64-Bit PCI Graphics Accelerator
- 8X CD-ROM Drive/3.5" Diskette Drive
- Vivitron15 .26dp Monitor (13.9" viewable)
- 7-Bay Mini Tower Case
- 104+ Keyboard & MS Mouse 2.0
- MS Windows 95
- MS Office 95, Professional Edition*

$1899 Business Lease† $70/mo.

P5-166

- Intel 166MHz Pentium Pocessor
- 16MB EDO DRAM
- 256K Pipelined Burst Cache
- 2.5GB 11ms EIDE Hard Drive
- 2MB DRAM, 64-Bit PCI Graphics Accelerator
- 8X CD-ROM Drive/3.5" Diskette Drive
- Vivitron17 .26dp Monitor (15.9" viewable)
- 7-Bay Mini Tower Case
- 104+ Keyboard & MS Mouse 2.0
- MS Windows 95
- MS Office 95, Professional Edition*

$2499 Business Lease† $92/mo.

G6-200

- Intel 200MHz Pentium Pro Processor
- 16MB DRAM
- 2.5GB 11ms EIDE Hard Drive
- Matrox 2MB WRAM Graphics Accelerator
- 8X CD-ROM Drive/3.5" Diskette Drive
- Vivitron17 .26dp Monitor (15.9" viewable)
- 12-Bay Tower Case
- 104+ Keyboard & MS Mouse 2.0
- MS Windows NT® Workstation 3.51 or MS Windows 95
- MS Office 95, Professional Edition*

$3299 Business Lease† $121/mo.

Gateway 2000® Solo™ Portable PCs

S5-100XL

- 10.4" Active Matrix SVGA Display
- Intel 100MHz Pentium Processor
- 8MB RAM (expandable to 40MB)
- 256K Pipelined Burst Cache
- 540MB Hard Drive
- Modular 4X CD-ROM Drive
- Modular 3.5" Diskette Drive
- Integrated 16-Bit Stereo Sound
- 1MB Video RAM
- Lithium Ion Battery & AC Pack
- 86-key MS Windows 95 Keyboard
- MS Windows 95
- MS Works 95
- Carrying Case

$2899 Business Lease† $107/mo.

S5-133XL BEST BUY

- 11.3" Active Matrix SVGA Display
- Intel 133MHz Pentium Processor
- 40MB RAM
- 256K Pipelined Burst Cache
- 1.2GB Hard Drive
- Modular 4X CD-ROM Drive
- Modular 3.5" Diskette Drive
- Integrated 16-Bit Stereo Sound
- 28.8 PCMCIA Fax/Modem
- 1MB Video RAM
- Lithium Ion Battery & AC Pack
- 86-key MS Windows 95 Keyboard
- MS Windows 95
- MS Office 95, Professional Edition
- Carrying Case

$5599 Business Lease† $200/mo.

All desktop systems standard with Gateway Gold™ Service & Support, which includes 3-year limited warranty. All portables standard with 1-year limited warranty. Call or write for a free copy.

The Gateway Solo line starts at 5.4 lbs. Weight includes 8MB RAM, 810MB hard drive, Lithium Ion battery & option bay cover.

** MS Office 95, Professional Edition includes Word, Excel, PowerPoint® presentation graphics program, Schedule+, Access database and Bookshelf® '95.*

†Leasing arranged by independent leasing companies to qualified commercial customers. Lease payments based on 36-month term. Lease terms subject to change without notice or obligation.

Toll free from Canada 800-846-3609

Toll free from Puerto Rico 800-846-3613

"You've got a friend in the business."®

888-888-1098

http://www.gw2k.com

610 Gateway Drive • P.O. Box 2000 • N. Sioux City, SD 57049-2000 • Phone 605-232-2000 • TDD 800-846-1778 • Fax 605-232-2023 • FaxBack 800-846-4526
International FaxBack Access 605-232-2561 • Component Add-On Sales 800-846-2080 • Sales Hours: 7am-10pm Weekdays, 9am-4pm Saturdays (CDT)

Destination™ Big Screen PCs

In the market for a multimedia PC? Consider upgrading to a Big Screen PC. Just like all our computers, the Destination Big Screen PC is built to order, with your choice of Pentium processor, RAM, hard drive, CD-ROM drive, diskette drive, and fax/modem.

The following Destination components replace the corresponding standard components of the Family PC and XL systems:

- **Video Card:** Destination 2MB VRAM Graphics Accelerator w/ Cable-Ready TV Tuner
- **Sound Card:** 16-Bit Hi-Fi Wavetable Audio Card
- **Monitor:** Destination 31" VGA Monitor
- **Case:** 7-Bay Charcoal-Colored PC Case
- **Keyboard:** Wireless Keyboard with Integrated EZ Pad™ Pointing Device
- **Mouse:** Field Mouse™ Remote with Integrated Trackball
- **Software:** Destination Software Collection
  (Call about this package of software specially selected for the Destination Big Screen PC's extraordinary multimedia capabilities.)
- **Speakers:** Not included. The Destination Big Screen PC has been designed for easy integration with your existing stereo system. Need a high-quality sound system? See speaker option at right.

Option

- **harman/kardon High-Fidelity Sound System**

Seven-piece Dolby® Surround Sound Pro Logic speaker system including AVR-10 audio/video receiver with remote, subwoofer, center channel, and four satellites for the ultimate multimedia audio experience. **$699**
(Special price available at time of system purchase only.)

Bigger-Than-Life Extras!

Multimedia/Communication

- CD-Recordable **$599**
  NEW *4X read/2X write recordable CD drive with SCSI Controller, Corel® CD Creator 2 32-bit software and three media disks.*
- Altec™ Lansing ACS-250 Subwoofer **$75**
  (upgrade from PCs that include Altec ACS-40 speakers)
- Altec ACS-400 Speaker System w/ ACS-250 Subwoofer **$120**
  (upgrade from PCs that include Altec ACS-40 speakers)

Networking

3Com® Ethernet Adapters

- 16-Bit Triple Media Card with BNC, AUI and RJ-45 Connectors **$99**
- 16-Bit Card with only RJ-45 Connector **$79**

Gateway Solo™ Portable Options

- 2GB Hard Drive **$300**
  (upgrade from 1.2GB hard drive)
- Docking Bar **$150**
- 28.8 PCMCIA Fax/Modem **$229**

Printers

- Epson® Stylus™ Color IIs Ink Jet Printer **$219** *less $30 mfr. rebate*
- Hewlett®-Packard DeskJet 600C Ink Jet Printer **$259**
- Epson Stylus Color II Ink Jet Printer **$299** *less $30 mfr. rebate*
- Hewlett-Packard LaserJet 5L Printer **$479**
- Hewlett-Packard LaserJet 5P Printer **$849**

Service & Support

Gateway Gold™ Premium

- Extended Three-Year On-Site Agreement* for Desktop Systems
- Priority 800 Number For Access to Technical Experts
  With system purchase **$99** / Within current on-site service agreement **$129**

(Ask about Gateway Gold Premium upgrade for the Destination Big Screen PC.)

**On-site service for desktop and tower systems is available to most U.S. and Canadian locations after determination by a Gateway tech that you need it. On-site service is provided by PC Technology Services Inc. Write or call for a free copy of our on-site service agreement.*

Software

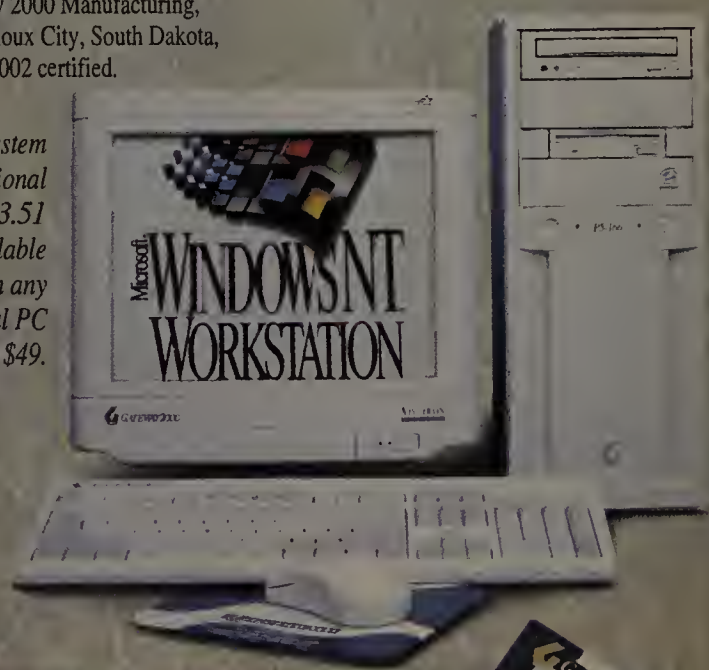
- Kid's BackPack™ III
  Includes School House Rock!™: Grammar Rock™; Sesame Street: Get Set to Learn®; Math Blaster 2®: Secret of the Lost City; Imo & The King™; Putt-Putt® Goes To The Moon™; and Gateway cow-spotted backpack. **$59**
- Finance Pack *(U.S. Shipment Only)*
  Includes Quicken Deluxe 5, Quicken Financial Planner,™ Quicken Family Lawyer,™ and Quicken Parents' Guide To Money.™ **$69**

Call the Gateway 2000 component add-ons division at 800-846-2080 for our complete line of extras for Gateway customers. Sales Hours: 7am-10pm Weekdays (CDT).

GSA Schedule # GS-00K-94-AGS-5150-PS01

Gateway 2000 Manufacturing, North Sioux City, South Dakota, is ISO 9002 certified.

P5-166 Professional System shown with optional Microsoft® Windows NT® 3.51 operating system, available pre-installed on any Gateway professional PC for only $49.



90 DAYS NO PAYMENTS
Ask About Our "90 Days No Payment" Program!

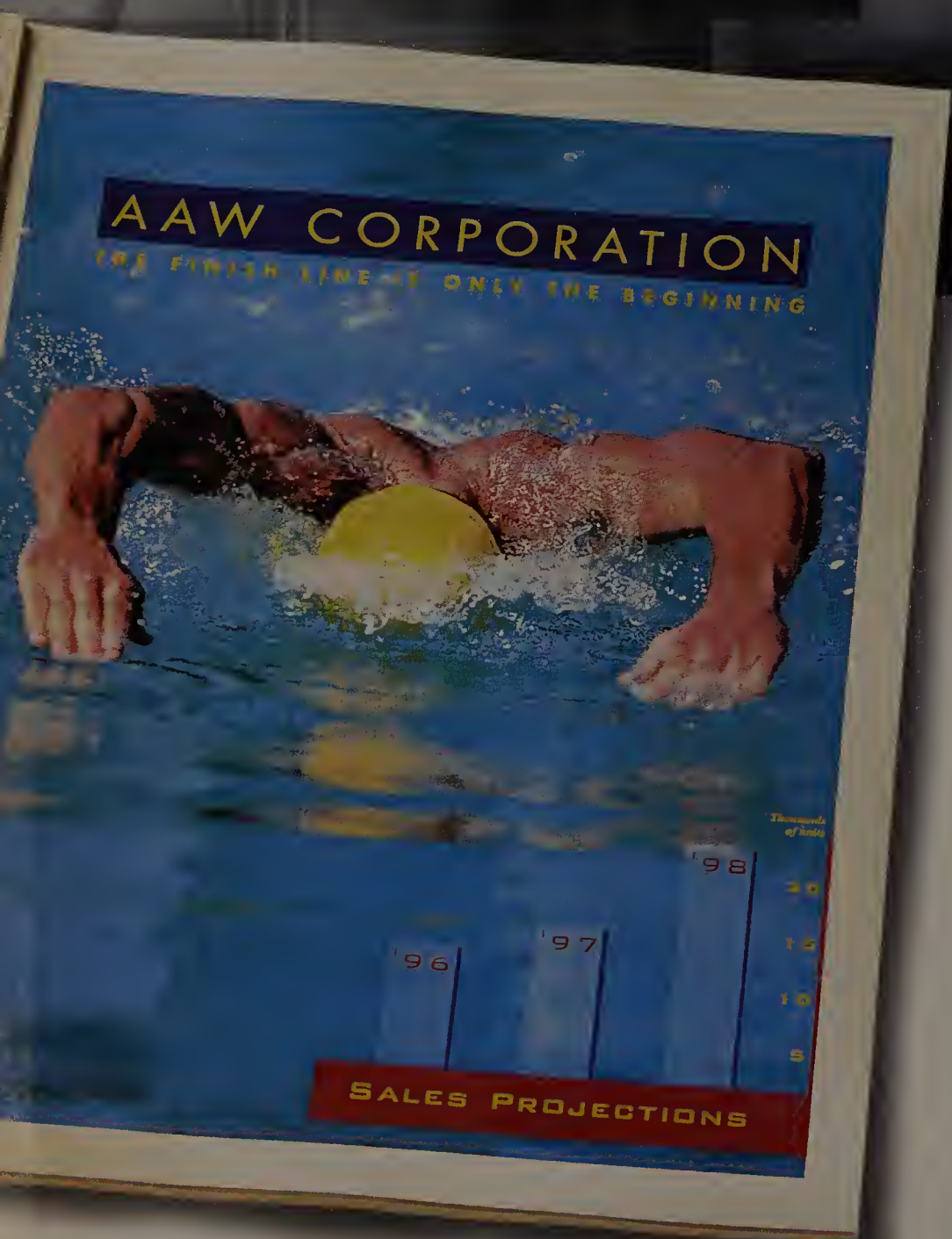
GATEWAY2000
"You've got a friend in the business."®

Call Toll Free! **888-888-1098**
http://www.gw2k.com

Gateway accepts most major credit cards and C.O.D. terms, with net 30-day terms and leasing options available to qualified commercial customers. You can also apply for the Gateway 2000 DuoLine™ MasterCard® card, issued by Dial National Bank, Des Moines, Iowa.

© 1996 Gateway 2000, Inc. Gateway 2000, CrystalScan, TelePath, black-and-white spot design, "G" logo and "You've got a friend in the business" slogan are registered trademarks, and Destination, EZ Pad, Family PC, Gateway Gold, Gateway Solo, Gateway 2000 DuoLine and Vivitron are trademarks of Gateway 2000, Inc. The Intel Inside Logo, Intel and Pentium are registered trademarks of Intel Corporation. All other brands and product names are trademarks or registered trademarks of their respective companies. All prices and configurations are subject to change without notice or obligation. Prices do not include shipping or applicable sales tax.

In the past, winning new business was a black or white proposition.



Introducing the future.
The HP Color LaserJet 5.

First impressions are important, but business is often won or lost based on last impressions. So why shouldn't your proposals be as impactful and persuasive as possible? With the new HP Color LaserJet 5 printer, they can. Dramatic improvements in technology allow the Color LaserJet 5 to create 1200 dpi equivalent image quality, literally producing millions of permanent solid colors. The Color LaserJet 5 is compatible with all popular software and is fully networkable. Best of all, with its remarkably low cost of ownership, you'll be amazed at how little it costs to add color to your documents. Call 1-800-LASERJET Ext. 1443 for some thoroughly convincing print samples. So you can start claiming business victories today.

©1996 Hewlett-Packard Company. See us at http://www.hp.com PE12593

HEWLETT® PACKARD

Hardware 67 | Software 76 | Sites and CD-ROMs 84 | Connectivity 86

IBM's ThinkPad Slims Down, Beefs Up

Thin and wide is this year's notebook fashion trend. The latest portable PCs, such as IBM's new ThinkPad 560 and expected releases from Compaq and NEC Technologies, measure just over an inch thick and weigh a mere 4 pounds, yet they feature the same full-size keyboards and large LCD screens found in larger notebooks. At long last, computer vendors have realized that business users don't want smaller notebooks with cramped keyboards and tiny screens, but *lighter* portables that won't wrench their backs when they're racing through airport terminals.

Out of the carton, the IBM ThinkPad 560's most striking feature is its svelte design—this aerobicized portable is slim enough to fit in the most cramped briefcase. (We examined a prerelease unit.) Open the notebook, and you're in for another pleasant surprise: The spacious keyboard features 85 keys (including separate keys for <Page Up>, <Page Down>, <Home>, and <End>), an integrated palm rest to reduce wrist strain, and IBM's TrackPoint pointing device. Don't expect perfection, however; some keys (such as the row of function keys) are half-size and might be a tad small for touch typists with stubby fingers.

The ThinkPad 560 also has a large LCD color screen: You can select an 11.3-inch dual-scan or a 12.1-inch active matrix display. The larger screen offers wider viewing angles—helpful if you use the ThinkPad for presentations—but both screens support resolutions up to 800 by 600, making these portables reasonable alternatives to desktop PCs.

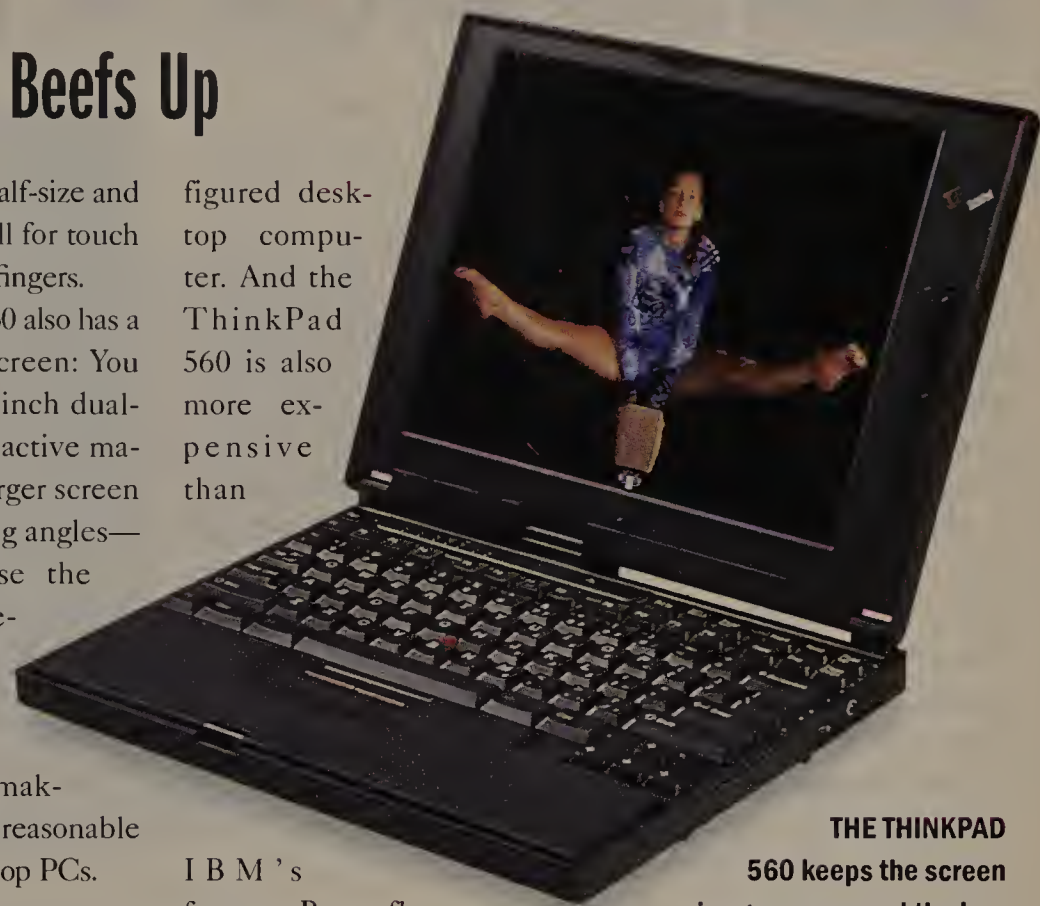
But don't throw out your minitower just yet. IBM's engineers had to make some compromises to achieve the ThinkPad 560's slender design, including resorting to an external floppy drive that connects to a dedicated port on the notebook's left side. The machine also lacks an internal CD-ROM drive, although you can connect an external unit from a third-party vendor to either the parallel port or one of two PC Card Type II slots. And while the ThinkPad 560 includes an IrDA-compatible infrared port for transferring files to and from infrared-equipped desktop PCs, there is no docking station for easy hookups to the office local area network. But you can connect to a LAN by installing an ethernet card in one of the PC Card slots.

Another issue is price: A ThinkPad 560 with a 100-MHz Pentium processor, 8MB of RAM, and a 810MB hard drive costs $2699—which is much higher than a similarly configured desktop computer. And the ThinkPad 560 is also more expensive than IBM's famous Butterfly subnotebook, the ThinkPad 701C. When IBM first shipped the ThinkPad 701C, with its expandable keyboard, subnotebooks seemed like the ideal replacements for bulky, heavy notebooks. But the subnotebooks' petite size means that their screens are too small to be useful. IBM is replacing the ThinkPad 701C altogether with the higher-powered, big-screen ThinkPad 560 and recently slashed the price of the 701C to just $1499.

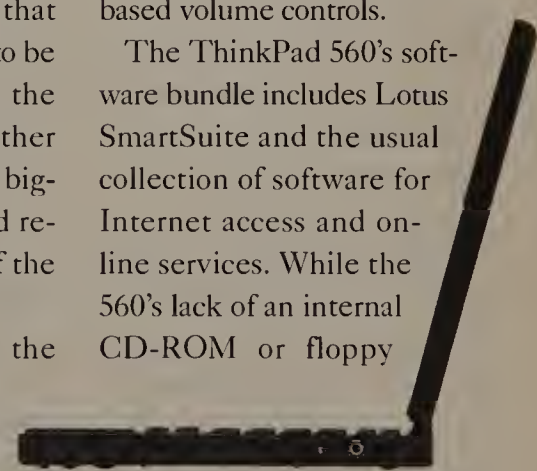
IBM maintains that the ThinkPad 560's lithium-ion battery powers the notebook for about 3 hours between charges, a claim that held true during our field tests of a preproduction unit. The included petite AC adapter is roughly the size of a pack of cigarettes, with a 9-foot–plus power cord that's long enough to reach those AC outlets hidden in the dark corners of hotel rooms. The ThinkPad 560 also has built-in audio and jacks for external speakers and a microphone. It even has a volume dial, which is easier to use than software-based volume controls.

The ThinkPad 560's software bundle includes Lotus SmartSuite and the usual collection of software for Internet access and online services. While the 560's lack of an internal CD-ROM or floppy drive keeps it from being the ideal desktop replacement, its light weight, ergonomic features, and aggressive price make it an excellent portable PC for business travelers with bad backs and limited budgets.

—Jeff Bertolucci



THE THINKPAD 560 keeps the screen size generous, and the keyboard is spacious enough to be comfortable for touch typists.



THIN IS IN: At just 4 pounds, the 560 won't break your back.

ThinkPad 560

A 4-pound portable with a large screen and keyboard.
IBM Corp.
800/772-2227
http://www.pc.ibm.com/
Street price: from $2699

QuickVideo Capture Board Creates Small, Portable Video Files

Want to show Grandma a movie of little Johnny's first steps without having to mail her the videotape? A new video capture card and compression technology from Alaris let you create compressed, full-motion video files that can be played back without special hardware.

The QuickVideo Capture Board's proprietary compression technology enables capture of full-motion video—30 frames per second—at resolutions up to 320 by 240, a quality that surpasses streaming video technologies available on the World Wide Web today. The video is compressed on the board before being sent to your hard disk, reducing the file's bandwidth and required drive space: Once compressed, 30 seconds of video take up about .5MB. The QuickVideo also contains built-in audio capture and playback, circumventing the need for a sound card.

You can send self-playing Videograms through e-mail or over the Internet or a company network; they're small enough that a 60-second video clip fits on a 3½-inch floppy disk. As long as the person who receives it has a Windows PC (minimum 486DX2-66), they can run your Videogram by clicking on its file icon.

Sound easy? You bet. It took only a couple of minutes to create a Videogram. Friends who received it complained only that the sound quality was poor and not easily adjustable. And I was disappointed by the small Videogram window, which averages 4 inches square. If you increase window size, resolution weakens to the point of blurriness. Unless you are crazy about keeping in touch with far-away friends, it might be difficult to justify QuickVideo's price—$399—for the thrill of sending goofy video clips.

—Samantha Parent

VIDEOGRAMS DELIVER FULL-MOTION VIDEO and a run-time engine for one-click playback, via e-mail or over the Internet.

QuickVideo Capture Board

High-quality video with easy playback on most PCs.
Alaris
800/317-2348
Street price: $399
Reader service no. 693

Canon Multifunction Printers Outpace Competition

You won't need to kick the tires to see if Canon's new Convertables are a honey of a deal. These multifunction printers let you scan, copy, and fax documents. Our favorite of the two models, the MultiPass C2500, is a color ink jet printer—and will be the only product of its kind on the market. (Lexmark's costlier Medley will be phased out and unavailable after June.)

At $599, the MultiPass C2500 beats Hewlett-Packard's comparatively priced multifunction ink jets—the OfficeJet Model 330 ($579) and Model 350 ($599)—in value, as the HP units don't offer color printing and have slower print and fax speeds.

We didn't receive a MultiPass C2500 in time for formal testing, but Canon gave us a peek at a preproduction unit. The MultiPass measures 18.8 by 19 inches and is 14 inches tall, so it doesn't hog desk space; it also has a straightforward control panel on the front that's simple enough for kids to use. Its rated print speeds are 5 pages per minute in monochrome and less than a page per minute in color. The printer provides 720-by-360-dots-per-inch resolution—more than adequate for business work—and the input tray holds 150 sheets. It also handles envelopes and transparencies, and on the fun side, even fabric sheets and T-shirt transfers. A bundled Canon Creative 1.4 CD-ROM includes applications for family projects.

As for faxing, the unit provides 14.4-kilobits-per-second transmission speed. It works as a stand-alone fax machine or can be used for faxing from your PC. The C2500 receives and stores up to 42 pages in memory if paper runs out.

You can make up to 99 monochrome copies at a time at 360-dpi resolution—superior to the 200-dpi copies that most multifunction printers provide.

A monochrome Convertible, the MultiPass 800, will also be available for $499. It'll save you $100, but it's considerably slower, with 2-ppm printing and 9600-kbps faxing. And its input tray holds only 100 sheets of paper.

—Laurianne McLaughlin

Canon MultiPass C2500, 800

Multifunction devices outperform the competition.
Canon Computer Systems
800/848-4123
Street price: C2500 $599, 800 $499
Reader service no. 694

The Compaq LTE 5000 Can Be Anything You Want It To Be.

And Now, It Can Be Yours For Just $2,899.*

We figured you'd expect the Compaq® LTE® 5000 to come complete with a powerful Pentium® processor, 8MB RAM, a 10.4" color dual scan display and two PCMCIA slots. Standard. So what makes this notebook so exceptional?

Well, the LTE 5000 is completely modular, so you can mix and match capabilities however you like. You can add an optional QuadSpeed CD-ROM drive, an extra battery — or even an extra hard drive. Just plug your choice of interchangeable devices into the front-loading MultiBay,™ and the LTE 5000 is as flexible as you are — no matter where you take it.

Then, whenever you need it, you can add the optional MultiBay Expansion Base, with integrated Ethernet. You'll get two more MultiBays — for additional modular devices, and the ultimate mix of power and flexibility.

You'll find that the best thing about the LTE 5000 is what you make of it. So call one of the numbers below, and make one yours today.

1-800-888-5819
WEEKDAYS 7-7, SAT. 9-3 CST
ASK FOR OUR NEW FREE CATALOG

COMPAQ DirectPlus

1-800-345-1518
FOR THE NAME OF YOUR NEAREST COMPAQ AUTHORIZED RESELLER

intel inside pentium® PROCESSOR

*All prices shown are Compaq DirectPlus prices. Reseller prices may vary. Other models available; call for pricing. Call for lease prices. Leasing is provided for a term of 36 months and is subject to approved credit and certain terms and conditions. Call for details. Battery packs and certain options are covered by a One-Year Warranty. The LTE 5000 is covered by a Three-Year Worldwide Limited Warranty. Offer available in the U.S. only. © 1996 Compaq Computer Corporation. All Rights Reserved. Compaq and the Compaq Logo Registered U.S. Patent and Trademark Office. DirectPlus is a registered service mark, LTE is a registered trademark and MultiBay is a trademark of Compaq Computer Corporation. Products, prices and programs are subject to change without notice. Other products are trademarks or registered trademarks of their respective companies. Pentium and the Intel Inside logo are registered trademarks of Intel Corporation in the U.S. and other countries.

Teac Tape1600: Low Cost, Big Backup

It doesn't take a rocket scientist to understand the benefits of backing up a hard drive. But with hard disks on new systems starting at 1.2GB, finding an affordable backup device of suitable capacity takes some searching. We examined a shipping version of Teac America's new internal Tape1600, which has a street price of $179. Its two-to-one compression on Travan TR-2 tapes yields a compressed capacity of 1.6GB, or 800MB uncompressed. Teac's Tape800 costs $30 less but uses TR-1 tapes and can provide only uncompressed storage of 800MB.

Initially my system couldn't find the Tape1600; and when I tested my floppy drive with a floppy disk, the disk turned out to be corrupted. (Eventually two other disks would be corrupted, but I don't know why.) After some adjustments the Tape1600 started working, and I was able to back up my hard drive. But then I had to disconnect the Tape1600 to secure it in its drive bay and close my computer's case. Once that was done, my system again failed to recognize the drive. After a couple of calls to Teac and a visit from a technician, I'm happy to say my backup drive is working fine.

However, the bezel that Teac provided for the cover of my minitower didn't fit: I had to jury-rig it with tape. And while the company provided two placeholders to widen the 3½-inch drive to fit my 5¼-inch bay, I had to drum up the rails to secure the drive.

I was told the installation process should have been easy, and considering the Tape1600's low price and 1.6GB of storage, I probably shouldn't complain too much. But installing it turned out to more of challenge than I'd anticipated.

—Gabrielle Mitchell

A REAL BARGAIN: Teac's Tape1600 internal tape backup drive can store up to 1.6GB of compressed data.

Tape800, Tape1600

Affordable tape backup drive had installation problems.
Teac America
213/726-0303
Street price: Tape800 $149, Tape1600 $179
Reader service no. 695

Creative Labs' New Graphic Boards a Bargain

The folks who put a Sound Blaster in virtually every PC are taking aim at another slot in your system. Creative Labs is entering the highly competitive video acceleration market with two boards based on chips from Cirrus Logic. The Graphics Blaster MA302 and Graphics Blaster MA202 were still in beta testing when we got our hands on them, but we liked the aggressive pricing and solid early performance.

The MA302, which uses the Cirrus Logic CL-GD5462 chip, is the first graphics board we've seen that uses a new type of video memory called Rambus DRAM. RDRAM's higher bandwidth allows more data to pass through at one time on the way to your monitor. While multimedia and 3-D applications will certainly benefit from the higher bandwidth, our early tests indicate that standard business programs won't run any faster with the MA302 than with currently available VRAM-based boards. Fortunately, the MA302 doesn't cost more than a VRAM board: At $199, it's a great value.

Like many leading low-cost graphics boards, the $149 Graphics Blaster MA202 uses EDO DRAM to deliver good performance in business applications while keeping the price down. Our preliminary tests show the board on a par with Top 10 bargains such as the STB Powergraph 64 Video (see Top 10 Graphics Boards).

Both boards support Microsoft's DirectDraw and DirectVideo, which means that compatible applications can take advantage of the boards' hardware acceleration to boost performance. DirectVideo did not work perfectly with the MA302, causing video clips to drop frames, but the company is working to fix this problem.

With these cards Creative Labs bundles a set of useful utilities called Blaster Control. The utilities add three tabs to the Windows 95 Display Properties box for centering images on your monitor, changing refresh rates, calibrating colors, and more. Overall, the Graphics Blasters are a good first effort from a household name.

—Brad Grimes

Graphics Blaster MA202 and MA302

Sound card leader enters the graphics market with two solid boards.
Creative Labs
800/998-5227
Street price: MA202 $149, MA302 $199
Reader service no. 696

At Just $1,475
Your Next PC Can Be A Compaq.

ProLinea 5100e
(monitor not included)

Looking for a great desktop PC for your business? With its powerful Pentium® processor, lightning speed, and easy upgradability, the Compaq® ProLinea® 5100e desktop PC will impress you. At its incredible new low price, it will astound you.

Add a variety of unique serviceability features that help decrease downtime and service costs and you've got a PC that fits quite nicely into your growing business.

So now you have no reason to settle for anything less than a Compaq — and every reason to call right now.

THE COMPAQ PROLINEA 5100e — $1,475*

- 100MHz Pentium Processor
- 8MB RAM expandable to 136MB
- 630MB Hard Drive
- 3.5" 1.44MB Diskette Drive
- Integrated PCI IDE Interface
- PCI Local Bus Architecture
- Plug-and-Play Compliant with Windows® 95
- Choice of Windows 95 or Windows 3.1 Preinstalled
- 3-Year Limited Warranty**
- With Compaq 140 Color Monitor (12.9" viewable) Add $255*
- With Compaq 150 Color Monitor (13.8" viewable) Add $375*
- With 1GB Hard Drive Add $130*

1-800-888-6139
WEEKDAYS 7-7, SAT. 9-3 CST
ASK FOR OUR NEW FREE CATALOG

COMPAQ DirectPlus®

1-800-345-1518
FOR THE NAME OF YOUR NEAREST
COMPAQ AUTHORIZED RESELLER

intel inside pentium® PROCESSOR

*All prices shown are Compaq DirectPlus prices. Reseller prices may vary. Other models available; call for pricing. Offer available in the U.S. only. Call for lease prices. Leasing is provided for a term of 36 months and is subject to approved credit and certain terms and conditions. Call for details. **ProLinea E is covered by a Three-Year Limited Warranty. Restrictions and exclusions apply. Monitors and certain options are covered by a One-Year Limited Warranty. Call for details. ©1996 Compaq Computer Corporation. All Rights Reserved. Compaq and the Compaq Logo Registered U.S. Patent and Trademark Office. ProLinea is a registered trademark and DirectPlus is a registered service mark of Compaq Computer Corporation. Products, prices and programs are subject to change without notice. Pentium and the Intel Inside logo are registered trademarks of Intel Corporation in the U.S. and other countries. Windows is a registered trademark of Microsoft Corporation. Other products are trademarks or registered trademarks of their respective companies.

Because bad power takes
make sure new Back-UPS

LIFETIME EQUIPMENT PROTECTION

$25,000

FOR AS LONG AS YOU OWN THIS PRODUCT, IF YOUR PROPERLY CONNECTED EQUIPMENT IS EVER DAMAGED BY AN AC SURGE, INCLUDING SURGES DUE TO LIGHTNING, APC WILL REPAIR OR REPLACE OUR PRODUCT AND UP TO $25,000 OF CONNECTED EQUIPMENT (SEE POLICY FOR DETAILS, VALID IN U.S. AND CANADA ONLY).

Guaranteed Protection against all power problems, on all power paths, for your PC and peripherals.

Back-UPS Office's compact design installs easily on desktop, floor, or mounts to wall. Its ninety-degree plug fits flush against the wall.

PC World 20 Best Upgrades

APC products have won more awards for reliability than all other UPS vendors combined.

Copyright 1996, APC. Trademarks are the property of their owners. AB0001

Integrates the Security of a Surge Suppressor with the Power of a UPS

Back-UPS Office provides enough outlets to protect your entire system. Six outlets guard your hardware with full time surge protection. Three of the six outlets provide instantaneous battery backup to keep your system from crashing in the event of a brownout or blackout.

Battery Replacement Warning Prevents Downtime

An LED signals when the Back-UPS Office's internal self-test finds the battery near the end of its life. You have 6-8 weeks replacement warning. Batteries typically last 3-6 years, and are user-replaceable.

Site-Wiring Fault Indicator

Without a proper ground, most surge protection is useless. Back-UPS Office alerts you to wiring problems such as missing ground and reversed polarity, two common wiring mistakes which otherwise would require an electrician's visit to diagnose.

FREE Solutions '96

What are the myths and musts of PC protection? What are the 10 most common power protection mistakes? The top tips for adding reliability to your PC? Get your FREE copy and find out!

○ **YES!** Please send me a FREE Solutions '96 Catalog

For prompt service, please fill out all information completely.

Name ..... Title: .....

Company .....

Address .....

.....

City: ..... State: ..... Zip: .....

Phone: ..... Fax: .....

E-Mail: .....

Brands of UPS used: .....

servers/PCs to be protected: .....

☐ End User ☐ Reseller

☐ Is this your first contact with APC?

APC
AMERICAN POWER CONVERSION

Dept. P3-BK

© 1996 American Power Conversion. All Rights Reserved. All trademarks are property of their owners BBO002

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON, RI

POSTAGE WILL BE PAID BY ADDRESSEE

APC™
AMERICAN POWER CONVERSION

Dept. P3-BK
132 Fairgrounds Road
P.O. Box 278
West Kingston, RI 02892-9920

multiple paths to your PC, Office™ gets there first

Convenient BlockSafe™ Outlet Spacing
Back-UPS Office's outlets are spaced to accommodate all size plugs, including large transformer blocks. You don't have to sacrifice the use of any of your outlets if you use block plugs.

Internet Ready Fax/Modem Protection
Back-UPS Office's built-in phone line/10 Base-T network cable surge protection prevents data line surges from damaging internal and external modems, motherboards, input/output cards, and other system components.

Protect ME! with APC

Bringing up the issue is awkward, but inevitable: You have a better chance of winning the lottery than of escaping power problems. Sooner or later, every computer user learns about surges, brownouts, spikes and blackouts. Unfortunately, most learn the hard way. Power problems are the single largest cause of computer data loss and hardware damage. If a power sag makes your modem drop the line while you're downloading a file from the Internet, or causes your keyboard to lock before you've saved work, you lose time, money and end up spending another late night at the office to meet your deadlines.

Only Back-UPS Office provides single device Multipath™ protection for all your equipment

The Multipath™ Power Protection Advantage	Traditional Surge Protector	Traditional UPS	Back-UPS Office
Protected Paths			
AC	•	•	•
Data			•
Phone			•
Total Outlets	7	2	6
Number of Block Outlets			2
Protection from			
Surges	•	•	•
Spikes	•	•	•
Blackouts		•	•
Brownouts		•	•
Typical Runtime in Minutes			
with Pentium 100 w/15" monitor		10	10
Battery backup for			
PC		•	•
Monitor		•	•
Storage Devices/Zip Drives		•	•
Full-time surge protection for			
Fax/Modem	•		•
Laser Printer	•		•
Speakers	•		•
Dataline protection for			
Internet or Network			•

Traditionally protecting all your equipment meant buying both a surge suppressor and a UPS. Even then only your AC line was protected. New Back-UPS Office protects all the paths to all your equipment.

Multiple peripherals and data lines to and from your system are vital, but dangerous. Without them, you can't do your job. However, plugging a phone line into your computer doubles your vulnerability to power problems; add any peripheral, and it triples. Even if your computer's AC power-line is shielded, when a surge hits an unprotected peripheral, it can blaze down serial and data lines, and toast your expensive PC.

Only Back-UPS Office provides true common ground protection

Figure 1

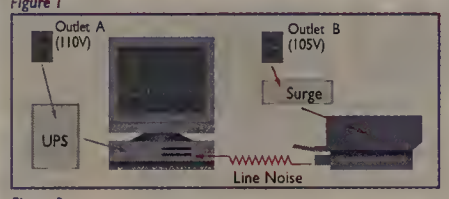


Figure 2

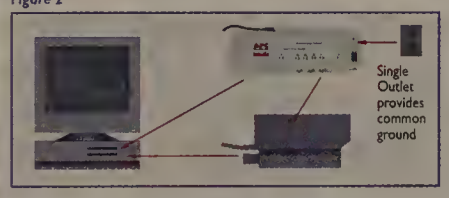


Figure 1: voltage differentials between multiple outlets create line noise and data glitches.
Figure 2: Back-UPS Office's common ground design eliminates the danger of voltage differentials.

Until now, protection for your entire system required several devices. But multi-device protection can leave you vulnerable to line noise and unwanted data glitches created by voltage differentials between outlets.

Back-UPS Office provides reliable, true common ground Multipath™ protection for your entire system. Instantaneous battery backup ensures uninterrupted operation of your CPU, monitor and external storage devices. Full-time surge suppression spreads a safety net around any remaining integrated peripherals, like modems, printers, speakers, and phone systems. Back-UPS Office's convenient BlockSafe™ outlet spacing handles all size plugs.

Back-UPS Office protection means true Multipath™ protection, clean, safe power to every peripheral, and instantaneous battery backup to keep your cutting edge system and O/S from crashing. It means protection for less by integrating the security of a surge suppressor with the power of a UPS, guaranteed up to $25,000.

Protect yourself before you kick yourself. Get your new Back-UPS Office today (list price: $179.99), or call APC for a FREE 60-page catalog!

Ask for APC award-winning power protection wherever top-quality computer products are sold.

APC®

AMERICAN POWER CONVERSION
Dept. P3-BO
800-800-4APC
401-788-2797 fax / 800-347-FAXX Powerfax
http://www.apcc.com
132 Fairgrounds Rd., W. Kingston RI 02892 USA

Circle 45 on reader service card

Quad-Speed too Slow? Plextor's 8Plex Spins Twice as Fast

Not long ago double-speed CD-ROM drives were the hottest thing in multimedia, delivering such cutting-edge enhancements as the ability to shovel data to the CPU at a blistering 300 kilobits per second. PC users rejoiced: Suddenly you could play video clips (albeit tiny and blurry ones) from a CD-ROM.

How quickly times change. Today, six-speed CD-ROM drives are the norm—even on entry-level PCs—and drive manufacturers keep upping the performance ante. For instance, Plextor's new 8Plex, an eight-speed CD-ROM drive, transfers data at up to 1.2 megabits per second, according to the company.

List priced at $399 internal and $499 external, the 8Plex is targeted at graphics professionals willing to pay top dollar for breakneck speed. In addition to its ultrafast data transfer rate, the 8Plex features a 256K cache for storing data that the drive is most likely to need next. It comes with SCSI and audio cables for connecting the drive to your computer. Plextor also sells a variety of 8Plex drive kits with SCSI boards.

Although installing a SCSI CD-ROM drive can be tricky (particularly for DOS and Windows 3.*x* users), the 8Plex's documentation does a fine job of guiding you step-by-step through the procedure. I installed a preproduction 8Plex drive on a 166-MHz Pentium running Windows 95 and encountered few problems; Windows 95 automatically detected the PCI SCSI bus controller and prompted me to install the required drivers, which are supplied by Plextor.

For the most part, the 8Plex ran well, delivering the smooth video playback you'd expect from an 8X drive. However, it's doubtful that most users will see a dramatic performance improvement over the 6X (and perhaps even 4X) drives until CD-ROM titles and other multimedia software applications are optimized for the 8X drive's speedy transfer rate.

—Jeff Bertolucci

EIGHT-SPEED CD-ROM DRIVE: Plextor's new 8Plex transfers data at speeds of up to 1.2 megabits per second, according to the company.

8Plex

SCSI-based eight-speed CD-ROM drive promises ultrafast performance.
Plextor
800/886-3935
List price: internal $399, external $499
Reader service no. 697

Adaptec Kit Offers Easy-to-Install SCSI Power

Most of today's off-the-shelf PCs come with IDE hard drives, but for speed and expandability it's hard to beat a SCSI-2 hard disk coupled with a dedicated controller. Adaptec's Power Storage Hard Drive Upgrade Kit, a one-stop shop for SCSI control, takes advantage of Win 95 Plug and Play support for painless installation.

The Power Storage kit includes the Adaptec AHA-2940 bus mastering host adapter, a Quantum Fireball 1080S 1GB hard drive in an external case, and all the cables and software you need to install the peripherals. A succinct and easy-to-understand installation guide is included, along with a detailed technical manual for more proficient users.

The kit comes in both ISA and PCI bus flavors, so it works with most PCs; the PCI version offers considerably better performance. I examined the shipping version of the PCI kit. Win 95 automatically detected the host adapter, installed its drivers, and set it up; all I did was plug in the card and connect the drive to it. (I still had to partition and format the drive manually.) Under Windows 3.1, the process is more complex: You have to press a hot key at boot time and set up the board's parameters manually in the AHA-2940's BIOS.

The Quantum Fireball 1080S hard drive is no slouch, especially when coupled with the PCI controller. I measured the combination's continuous data transfer rate at a hair over 5MB per second—more than twice that of your typical IDE drive. And the PCI controller allows for true multitasking under Windows 95, which IDE can't support. (I didn't test the ISA bus version, but Adaptec says its rate should be closer to typical IDE performance.)

At $599 list, the Power Storage Kit sounds expensive, especially since you can buy higher-capacity hard drives for half the price. But a SCSI card can quickly increase the performance of your existing system while offering an upgrade path for the future.

—Stan Miastkowski

Power Storage Hard Drive Upgrade Kit

1GB Fast-SCSI hard disk upgrade for virtually any PC.
Adaptec
800/442-7274, 408/945-8600
List price: $599
Reader service no. 698

CONVERT IT WITH HIJAAK® PRO™!

HiJaak PRO 4.0 is the professional 32-bit graphics toolkit for users working with Windows 95. It features top quality, fast image conversion, trace, and screen capture in over 85 raster, vector and metafile formats. It supports graphics view, print, find, enhance, thumbnail, catalog, browse and scan.

HiJaak PRO now also supports full PostScript Level 2 and five of the most common 3D formats: DXF, DWG, IGES, 3DS and VRML. HiJaak PRO makes it easy to accomplish any graphics task by providing shortcut menu access to HiJaak's most common graphics functions. Using HiJaak PRO, engineers can scan, trace, and catalog their legacy blueprints; graphics designers can thumbnail, organize, import, and enhance their clip art and convert incompatible files; and technical writers can take top quality screen captures and import them into any desktop publisher.

View 3D formats with user-selectable Point of View, and render 3D images in wireframe, flat, or gouraud shading. Using *MDI,* HiJaak PRO enables viewing of multiple images simultaneously. With the new font scanning utility feature, fonts that do not automatically register with Windows can be found and utilized. And with new support for extra large icons, you get thumbnails of images which are rich in detail and easy to see in the Windows 95 Explorer.

Call us at 1-800-683-6696 and ask for code 01200, or check out our website at http://www.quarterdeck.com/

QUARTERDECK.

© 1996 Quarterdeck Corporation. All rights reserved. Quarterdeck and HiJaak are registered trademarks. HiJaak PRO and the Quarterdeck "Q" symbol are trademarks of Quarterdeck Corporation. All other products mentioned are trademarks or tradenames of their respective holders.

Circle 189 on reader service card

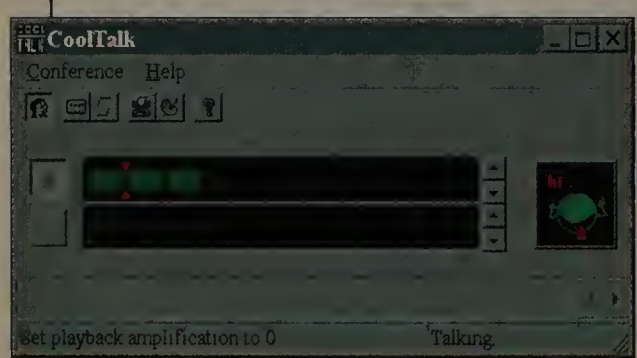
Internet Explorer Versus Netscape Navigator: Round Three

Over the past year, Netscape Navigator has become synonymous with Web browsing, and Microsoft's Internet Explorer has had to settle for a very remote second place. Navigator 2.0's advantages over Internet Explorer 2 include support for plug-ins, Java, and frames. The first two extend the browser's functionality beyond anything dreamed of by Navigator's developers. Internet Explorer 2 has few proprietary features of its own—background music, a scrolling text feature called Marquee, and that's about it.

But everything's about to change. By the time you read this, version 3 of both products should be shipping, and now all bets are off.

Technical Knockout

Internet Explorer isn't just playing catch-up. Sure, the new version supports plug-ins, Java, and frames, but in the grand tradition of software one-upmanship, its frames have an extra option: They can dispense with unsightly borders.



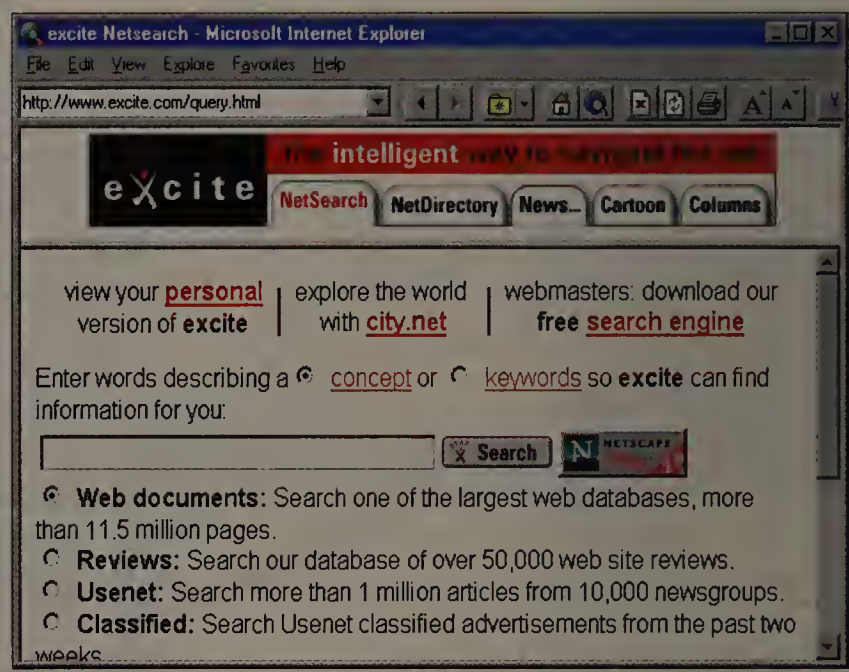
NAVIGATOR 3.0'S BEST ADDITION is CoolTalk, an Internet phone client.

Microsoft is putting significant weight behind its new ActiveX object technology, which makes Internet Explorer 3 as expandable as Navigator, perhaps even more. Using ActiveX *controls*—or applets—developers can create Web applications currently possible only with Java and plug-ins. Microsoft is planning to release at least 20 ActiveX controls with Internet Explorer 3, and many third-party developers have announced additional controls.

Internet Explorer 3 supports TrueType fonts, so a Web author can define specific typefaces in a Web page. And if you're tired of the bloated Exchange client included with Windows 95, you'll be happy to know that Internet Explorer comes with Microsoft Internet Mail for sending and receiving Internet e-mail, as well as the Microsoft Internet Newsreader. Another control tool, complying with Recreational Software Advisory Council specifications, can apply a filtering system to shelter minors from unsavory sites. Microsoft has also announced that it will include a whiteboard tool with Internet Explorer 3, but it was not in the early version that we previewed.

Reigning Champ

When we looked at a prerelease version of Netscape's next-generation Web browser, we found Netscape adding some innovations of its own. (Note: *PC World*'s parent company, International Data Group, is a minority shareholder in Netscape Communications.) CoolTalk is a terrific add-on from Insoft, which Netscape recently acquired. A full-duplex Internet phone client, CoolTalk includes a pop-up chat screen for typing, and a whiteboard paint applet; whatever you draw or type on your screen shows up instantly on the other person's screen. Built-in screen-capture lets you paste any portion of an open document onto the whiteboard so you and a colleague can annotate it during a chat session. The only thing missing from CoolTalk is OLE support for real-time object editing. Navigator 3.0 supports integrated audio and video and enhanced security options. There's no support for TrueType fonts, but Netscape says a future release will include it.



INTERNET EXPLORER 3 does frames and almost everything else that Navigator does—and will be available as a free download.

Get Ready to Rumble

Now that Navigator and Internet Explorer seem to support the same features, the question is, which one is more affordable? Microsoft will make Internet Explorer 3 available as a free download. Netscape still plans to charge $49 for its browser. You do the math.

However, another much-anticipated version of Internet Explorer, incorporating the Windows 95 Desktop Explorer for seamless online browsing and local file management, won't be free. That release, expected two to three months after Internet Explorer 3, is rumored to be a Microsoft Plus–like offering. Users who want that version of Internet Explorer will not have a free browser after all.

—Yael Li-Ron

Internet Explorer 3, Navigator 3.0

Browsers face off with comparable features.

Microsoft Corp.
800/426-9400
Pricing: free
Reader service no. 678

Netscape Communications Corp.
415/528-2555
Street price: $49
Reader service no. 679

WHAT EFFECT COULD SPEEDYROM™ HAVE ON YOUR CD-ROM DRIVE?

Let's face it. With most CD-ROM drives, you have to wait an eternity as the drive chugs along.

But SpeedyROM can change that in a hurry. This software program makes any CD-ROM drive run faster, regardless of its present speed. SpeedyROM's exclusive technology reduces waiting time and boosts performance, even in the latest 8x-speed CD-ROM drives. So you can zip through all your favorite CD titles—and enjoy them even more.

Need to search your favorite CDs quickly for reference information? SpeedyROM lets you browse those encyclopedia entries and clip art files faster than ever before. Which helps you do more work in less time.

And SpeedyROM can take your CD-ROM games to an even higher level. It can reduce choppiness in the graphics, to smooth out game play. You also get the improved responsiveness you need for the latest, most demanding games.

SpeedyROM. It's far less expensive than a new CD-ROM drive, yet gives you the same fast results. To find out more, call us at 1-800-683-6696 and ask for code 01152. You can also see your local retailer. Or visit our website at http://www.quarterdeck.com/

Then, get SpeedyROM. And put a lot more drive in your CD-ROM drive.

QUARTERDECK.

© 1996 Quarterdeck Corporation. All rights reserved. Quarterdeck is a registered trademark. SpeedyROM and the Quarterdeck "Q" symbol are trademarks of Quarterdeck Corporation. All other products mentioned are trademarks or tradenames of their respective holders.

Circle 194 on reader service card

Trading Software Bullish for Wall Street Buffs, Bearish for Beginners

These days it's almost easier to track your stocks online than through the newspaper. But once you have your data, what next? Tracking stock performance requires a program that's designed to monitor and analyze the vagaries of the market. Until recently, a package for this task cost at least $3000, affordable only for professional traders. Omega Research's $49.95 Wall Street Analyst is stock-tracking software for the rest of us.

Wall Street Analyst can generate a graphical chart for stocks traded on most exchanges. You can apply various performance formulas, called *indicators*, to a selected stock to determine how it will perform in the future.

I had no trouble loading the program, and in just a few minutes I was able to create a Microsoft stock chart and apply an indicator to generate a second chart. But once that was done, I wasn't sure what my charts were telling me. Sure, I could see that Microsoft's stock had climbed precipitously in the last year, and the indicator I applied to my data showed the market would be moving strongly one way or the other (it doesn't specify which direction, though). But the documentation explained only what the charts were doing, not which of the indicators was best to run on my stock, and it failed to explain indicators in general and how to use them. The documentation also neglected to explain whether the nifty little chart that showed me the indicator applied just to Microsoft stock or whether it included all the additional market data the program had socked away on my hard drive. The answer is probably so obvious to most serious investors that the documentation writers didn't think to mention it, but it's just this sort of lack of basic context that will trip up the neophyte user.

For the sophisticated stock buff who itches to perform a candlestick analysis or some other pet formula, Wall Street Analyst stands out because it is easy to use and includes about 30 indicators. It has an attractive, easy-to-understand interface and includes most of the obscure indicators favored by real traders.

If you're dedicated to learning stock analysis, you could probably do it with this program and a few good books; but if you just want a fun learning tool that will introduce you to basic investment concepts, forget it. The documentation admirably explains how the program works, but it doesn't tell you much about the market, nor does it explain key concepts—like indicators. It does recommend several books for further reading, in case you don't know where to begin.

—Cate T. Corcoran

Wall Street Analyst

The program is easy to use, but results may be confusing for stock novices.
Omega Research Inc.
800/556-2022, 305/270-1095
Street price: $49.95
Reader service no. 680

GENERATING CHARTS WITH WALL STREET ANALYST is easy, but understanding what they mean takes some market know-how.

Open Sesame: Mac Media for PCs

Until just a few years ago, putting a Mac-formatted disk into a PC's disk drive was like trying to stick a round peg into a square hole. Then along came utilities such as MacinDOS that let PC users read and write to Mac disks from their PC drives. They helped some, but could read only high-formatted floppies.

Now DataViz has come up with a transparent solution called MacOpener 2.0. You don't actually open the program, instead it runs in the background of Windows 95, NT, and 3.1. When you want to read a Macintosh-formatted disk, CD-ROM, or removable cartridge, just click on the drive from File Manager or Windows Explorer. MacOpener can read and copy Mac-formatted media as if it were formatted for Intel-based computers.

You can easily format Mac disks, including high-density disks, with the MacFormat command, which appears in the File menu in Windows 3.1 and NT, and is available in Windows 95 as a menu selection when you right-click a floppy drive icon.

If MacOpener senses a previously formatted Mac disk in the drive, you can use a Quick format option that cuts formatting time by 90 percent.

When you launch MacOpener, don't expect a program icon to appear in your Windows 95 Taskbar. But otherwise MacOpener works like a charm.

—Michael S. Lasky

MacOpener 2.0

Windows utility for reading Mac media on a PC.
DataViz
800/733-0030
Street price: $49
Reader service no. 681

QUARTERDECK

Every 33 Seconds, Someone Buys a Copy of QEMM® or MagnaRAM™. Here's Why:

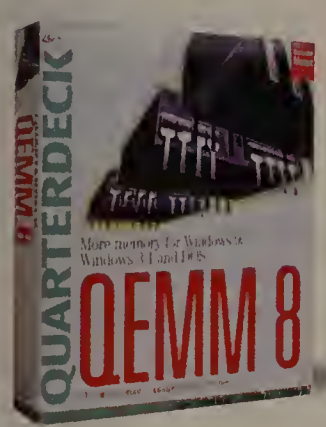
It's simple. No matter how much you spend on memory for your system, you can't do what you want unless that memory is managed properly. So no matter which operating environment you use — Windows 95, Windows 3.1, or DOS — QEMM 8 gives you the 32-bit memory management you need. QEMM is the powerful, painless way to manage your memory.

QEMM lets you run more programs simultaneously, without those dreaded "out of memory" messages. QEMM's memory multiplier, MagnaRAM (also available separately), uses memory compression to increase the amount of memory available in Windows 95 and Windows 3.1. QEMM's Resource Manager controls Windows 3.1's User and GDI resources intelligently to allow you to load more programs at once.

And QEMM's conventional memory management deftly moves parts of the operating system out of the way, along with memory-eating TSRs and drivers, giving you up to 634K of precious conventional memory. All this gives you more memory for your operating environment, your applications, and, when the work is done, for your games. QEMM and MagnaRAM are the results of Quarterdeck's 10 years of leading-edge memory management research.

"QEMM takes memory management to a new level."
PC Magazine, February 6, 1996

"...MagnaRAM 2 is the first and only utility to successfully tackle memory constraints on PCs running Windows 95."
"Stretch your RAM and open more files under Windows 95."
Verdict: ★★★★
PC Computing, March 1996



"...MagnaRAM [is] a hit in "creating" more RAM..."
InfoWorld, November 27, 1995

"...[QEMM8] powerful; easy to install; widest range of memory management features of any product on the market."
InfoWorld, January 22, 1996

"The User Choice Award for Best Memory Managers goes to QEMM."
Jerry Pournelle, BYTE, April 1996

Call us at: (800) 683-6696 or visit our Web Site at: http://www.quarterdeck.com/

Ask for code 01001. E-mail: info@quarterdeck.com

©1996 Quarterdeck Corporation. All rights reserved 13160 Mindanao Way, Marina del Rey, CA 90292. Quarterdeck and QEMM are registered trademarks. MagnaRAM and the Quarterdeck "Q" symbol are trademarks of Quarterdeck Corporation. All other trademarks or tradenames are the properties of their respective holders.

Circle 185 on reader service card

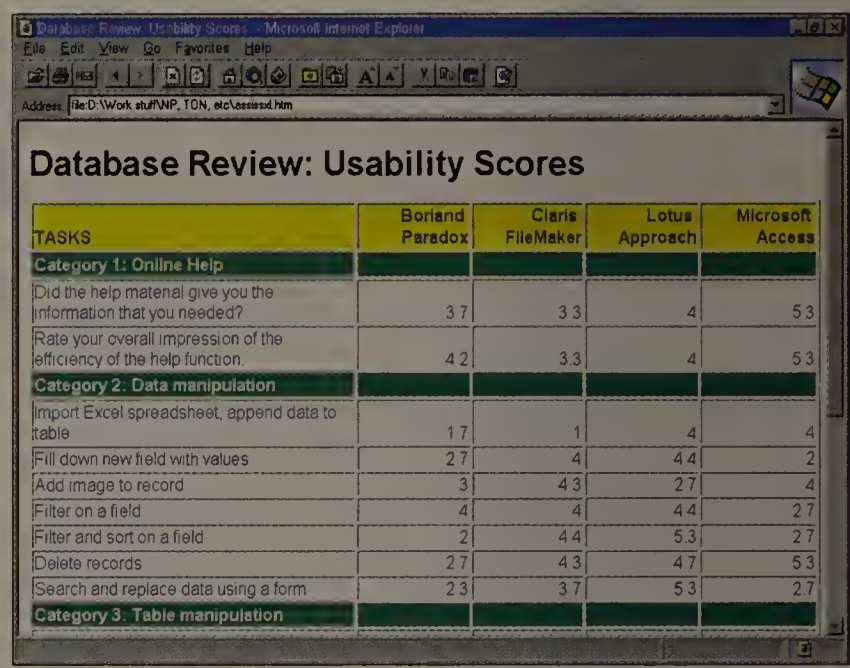
Internet Assistants Take Office to the Web

The new cog in the Internet wheel is converting existing documents into hypertext markup language. Microsoft Word already has an Internet Assistant that reformats pages to HTML output, so even Web novices can publish documents for the World Wide Web or corporate intranets.

Now Microsoft has extended this feature to the rest of Microsoft Office 95 with a collection of free Internet Assistants that can convert any Office document into an HTML page quickly and easily. For example, you can apply an Internet Assistant to a Microsoft Excel spreadsheet and generate an HTML table in a matter of seconds, while retaining special formatting such as background colors. Access data can also be converted to HTML tables. Schedule+ calendars and PowerPoint presentations are converted into static GIF images that you can post as a series of HTML pages. Competitors like Starfish's Internet Sidekick, on the other hand, let you post live calendar entries.

While Internet Assistant for Microsoft Word is an excellent tool for creating Web pages, the value of the other Assistants is limited by the nature of the applications' data. The Assistants generate static HTML pages that must be regenerated each time the original document changes. The PowerPoint tool is especially lacking: Original slides that include special effects lose the properties that make them engaging. Microsoft's solution is to offer a viewer for each Office application (except Schedule+). The viewer becomes a helper application that displays data in all its intended glory. But if you want to post Excel or Access tables that don't change often, the Internet Assistants can't be beat.

—Yael Li-Ron



Database Review: Usability Scores

TASKS	Borland Paradox	Claris FileMaker	Lotus Approach	Microsoft Access
Category 1: Online Help				
Did the help material give you the information that you needed?	3.7	3.3	4	5.3
Rate your overall impression of the efficiency of the help function.	4.2	3.3	4	5.3
Category 2: Data manipulation				
Import Excel spreadsheet, append data to table	1.7	1	4	4
Fill down new field with values	2.7	4	4.4	2
Add image to record	3	4.3	2.7	4
Filter on a field	4	4	4.4	2.7
Filter and sort on a field	2	4.4	5.3	2.7
Delete records	2.7	4.3	4.7	5.3
Search and replace data using a form	2.3	3.7	5.3	2.7
Category 3: Table manipulation				

FROM EXCEL TO WEB PAGE IN FIVE MOUSE CLICKS: The Excel Internet Assistant retains much of the original formatting.

Internet Assistants for Microsoft Office

Limited but helpful file converters.
Microsoft Corp.
Pricing: free
800/426-9400
Reader service no. 682

Rx for Sluggish CD-ROM Drives

If your CD-ROM drive is agonizingly slow, accelerator software could speed it up—but it will cost you space on your hard drive (and a few dollars as well).

Both Ballard Synergy's d-Time95 and PC-Kwik's CD-ROM Express accelerate the performance of your CD-ROM drive—shaving as much as 75 percent off the time for an average search. I examined these two 32-bit utilities under Windows 95, running them on a 90-MHz Pentium system with a 6X SCSI CD-ROM drive. I hadn't used an accelerator on this system before because most text searches produced results quickly.

Both accelerators disable Windows 95's CD-ROM cache program. CD-ROM Express and d-Time95 use similar technology: The software copies frequently accessed files—including search tools, indexes, and data —from the CD-ROM into a permanent cache on your hard drive. You set the cache size, but 30MB is an appropriate minimum.

When CD-ROM Express is searching a title that appears in its database (the list of titles is available via fax-back at 503/520-4200), it is 50 percent faster than d-Time95. But d-Time95, which runs only under Windows 95, uses fewer system resources and has generally better performance results overall. Unfortunately, d-Time95 has no ready-made catalog of indexes and tools—you have to create your own database for all of your discs.

Do you need to purchase one of these programs? On my Pentium system, it wasn't worth the price and hard drive space. But you might find these products useful if you have less-powerful equipment, say a 486-33 PC with a double-speed CD-ROM drive, and you use databases heavily. If most of your frequently used titles are in CD-ROM Express's database, I'd recommend it over d-Time95.

—Jeff Sengstack

CD-ROM Express

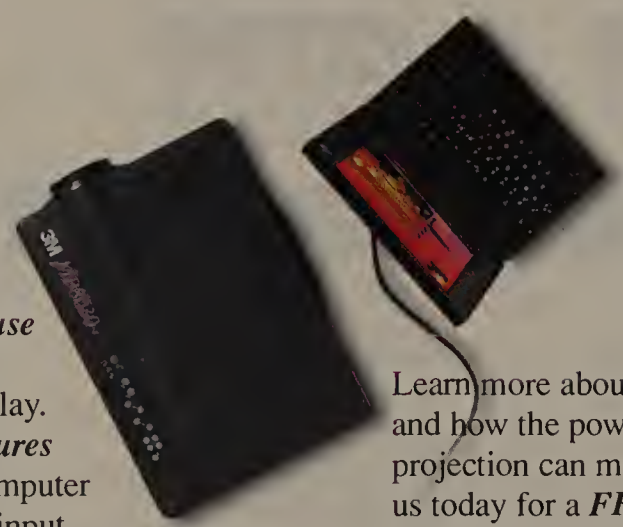
Excellent performance, but not as slick as d-Time 95.
PC-Kwik
800/274-5945
List price: $79.95
Reader service no. 683

d-Time95

Requires time and effort to get full value.
Ballard Synergy
800/692-0492
List price: $89.95
Reader service no. 684

The power to shine.

From the power brand in electronic projection



The new, portable 3M™ MP8030 Multimedia Projector delivers an impressive 500* ANSI lumens. So your presentations will really shine, even with the lights on.

But brightness isn't all that makes it brilliant. ***The image is more uniform*** — edge to edge, corner to corner. The resolution is ***sharper, clearer, crisper.*** And ***richer color saturation*** gives your computer and video images more pop.

A true lightweight at ***only 24 pounds***, it travels nicely anywhere.

The new 3M™ MP8030 Multimedia Projector

It's as ***easy to use*** as it is to carry. Just plug and play. ***Advanced features*** include two computer and two video input channels, audio output and a VirtualMouse remote with power zoom and power focus. There's even a loop-through, which allows you to view your monitor and projected image simultaneously.

And as you'd expect from the presentation professionals at 3M, every MP8030 comes with ***unmatched technical assistance, service and how-to support.***

Learn more about the new 3M MP8030 and how the power brand in electronic projection can make you shine. Contact us today for a ***FREE video and interactive CD-ROM*** explaining presentation technologies and solutions.

We're easy to reach

800-952-4059

http://www.mmm.com/office
e-mail: presentations@mmm.com

*Manufacturer's specification for output is 500 ANSI lumens at maximum setting. Performance of individual units may vary by up to ±10%.

© 3M 1996

3M *Innovation*

Circle 7 on reader service card

DESKTOP PRICES HAVE DROPPED ACROSS THE MOTHERBOARD.

200MHz PENTIUM® PRO PROCESSOR
DELL DIMENSION™ XPS Pro200n

- Mini Tower Model
- 32MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- NEW Imagine 128 Series 2 Graphics Accelerator with 4MB VRAM
- 8X EIDE CD-ROM Drive
- MS® Office Professional with Bookshelf for Windows® 95 (N.F.I.)
- Microsoft® Windows NT™/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty†
- ★ *Upgrade to 64MB of EDO memory, add $699.*
- ★ *Upgrade to 1 Year of Windows NT software support, add $149.*
- ★ *Upgrade to 2GB SCSI hard drive, add $375.*

$3649
Business Lease◊: $131/Mo.
Order Code #500274

200MHz PENTIUM PRO PROCESSOR
DELL DIMENSION XPS Pro200n

- Mini Tower Model
- 16MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of EDO memory, add $299.*
- ★ *Upgrade to 3 Years of On-site△ Service, add $99.*
- ★ *Upgrade to the Imagine 128 Series 2 with 4MB VRAM, add $329.*

$2799
Business Lease: $104/Mo.
Order Code #500273

200MHz PENTIUM PROCESSOR
NEW DELL DIMENSION XPS P200n

- Mini Tower Model
- 32MB SDRAM Memory
- 512KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- 28.8 Data/Fax Modem
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *1.6GB/3.2GB Travan Tape Back-up, add $249.*

$3449
Business Lease: $128/Mo.
Order Code #500272

NEW

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of SDRAM memory, add $299*

PICTURED SYSTEM

$2499
Business Lease: $92/Mo.
Order Code #500271

166MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P166s

- Mini Tower Model
- 32MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

$2799
Business Lease: $104/Mo.
Order Code #500270

133MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P133c

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 15LS Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 512KB Pipeline Burst Cache, add $49.*

$2199
Business Lease: $81/Mo.
Order Code #500269

133MHz PENTIUM PROCESSOR
DELL DIMENSION P133t

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15LS Monitor (13.7" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *3Com® EtherLink® Interface Combo Card, add $99.*
- ★ *28.8 Data/Fax Modem, add $129.*
- ★ *ACS-31 Speakers and AWE32 Sound Card, add $219.*

$1799
Business Lease: $67/Mo.
Order Code #500268

100MHz PENTIUM PROCESSOR
DELL DIMENSION

- Mini Tower Model
- 8MB EDO Memory
- 256KB Pipeline Burst Cache
- 850MB Hard Drive [12ms]
- 14XE Monitor (13.19" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 16MB of EDO memory, add $99.*
- ★ *Upgrade to a 1.6GB hard drive, add $90.*

$1449
Business Lease: $54/Mo.
Order Code #500267

NEW STANDARD 3 YEAR LIMITED WARRANTY WITH ALL DELL DIMENSION SYSTEMS.

‡Pricing is not discountable †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite O, Austin, TX 78758 ◊Business leasing arranged by Leasing Group, Inc. *System weight with floppy drive in options bay. △On-site service provided by BancTec Service Corporation. On-site service may not be available in certain remote locations. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo are registered trademarks and Windows NT is a trademark of Microsoft Corporation. XJACK is a registered trademark of US Robotics Mobile Communications Corporation. 3Com and EtherLink are registered trademarks of 3Com Corporation. ©1996 Dell Computer Corporation. All rights reserved.

DELL DIMENSION
Reliable PCs For High Performance Computing

133MHz PENTIUM PROCESSOR
DELL LATITUDE LM P133ST

- NEW Network-ready Notebook
- 11.3" SVGA Active Matrix Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty†

★ *Dell Latitude DeskDock™ station with Advanced Port Replicator, add $229.*

PICTURED SYSTEM

$3899‡
Business Lease: $140/Mo.
Order Code #800047

133MHz PENTIUM PROCESSOR
DELL LATITUDE LM P133ST

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds*
- Extendable 1 Year Warranty

★ *Upgrade to a 1.3GB hard drive, add $400.*
★ *2nd Lithium Ion Battery, add $249.*

PICTURED SYSTEM

$3499‡
Business Lease: $129/Mo.
Order Code #800051

100MHz PENTIUM PROCESSOR
DELL LATITUDE LM P100SD

- NEW Network-ready Notebook
- 10.4" SVGA Dual Scan Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to a 1.2GB hard drive, add $400.*

$2699‡
Business Lease: $100/Mo.
Order Code #800053

100MHz PENTIUM PROCESSOR
DELL LATITUDE LM P100SD

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to 16MB of RAM, add $299.*

$2799‡
Business Lease: $104/Mo.
Order Code #800049

Now we've dropped prices on our *entire* Dell Dimension line. So compare spec to spec, hertz to hertz and decimal point to decimal point with any other Pentium processor PC, and you'll find Dell comes out on top.

Actually, you'll come out on top. Because, besides getting a great deal on our award-winning PCs, you'll also get a company that has a proven track record in service, support and reliability. For a record twelve years.

So order your new, low-priced Dell Pentium processor based PC today. And save across the board with a single phone call.

DIRECT NEWS ON THE INTERNET
For free updates on Dell's product offerings, pricing and other news electronically, send an email message to "DirectNews-request@dell.com." Please use the word "subscribe" as the body of your message.

DELL®

TO ORDER
800-626-8464
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03153

Look Out, Travel Agents—Here Comes Travelocity

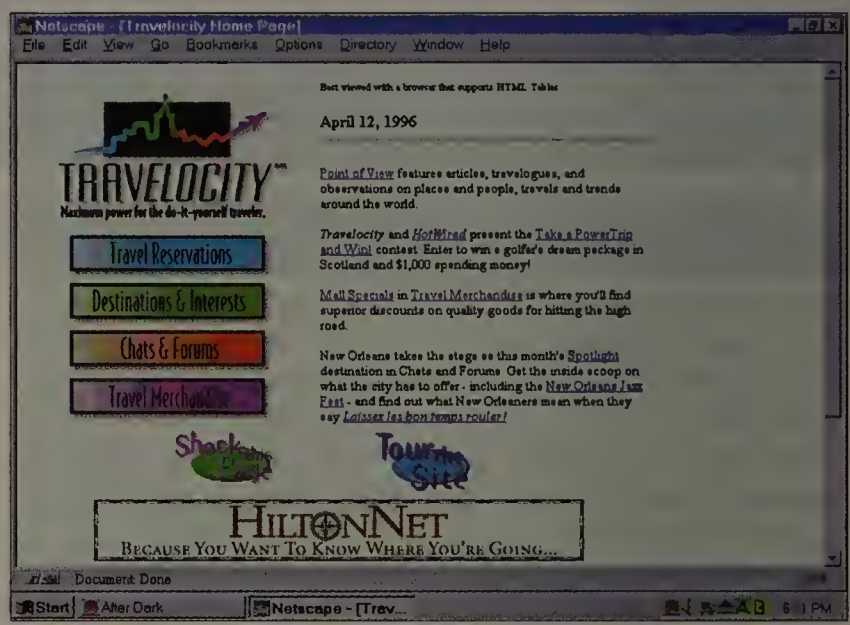
Travel sites are rolling onto the World Wide Web with the regularity of the tides, but the convenience and versatility of Travelocity (http://www.travelocity.com) will surely make it a favorite.

Travelocity's advantages start with the Sabre global reservation system, operated by AMR, American Airlines' and Sabre Interactive's parent company. This connection nets you 500 frequent flier points each time you buy AA tickets online. The site offers schedules for some 700 airlines, and online ticketing for 370. You can get info on 50,000 lodging places; booking for 28,000 hotels and 50 car rental firms will be available later this year. Other travel sites are skimpy by comparison: www.Travelweb.com, for example, lets you book lodging but lists only 6825 hotels.

Travelocity offers secure transactions for credit card purchases. (It supports secure HTTP, the protocol that the Netscape Navigator browser uses.) Tickets are sent by mail. But you don't have to give a credit card number to explore the site, which lists schedules and ticket prices, with and without restrictions. The 3 Best Itineraries feature acts like a virtual travel agent, finding the best options for you.

On the downside, Web traffic makes for slow replies.

—Michael S. Lasky



YOUR FAVORITE TRAVEL DESTINATION: The Travelocity site offers more information than its competitors. Plus, it's easy to explore.

Travelocity

One-stop travel information and online booking.
Sabre Interactive
http://www.travelocity.com
Pricing: Free

Course on CD-ROM Teaches Managers About Diversity

Are you trying to provide sensitivity training for your workforce? You'll get it from Managing Across Difference, an interactive course on CD-ROM from Harvard Business School Publishing. It's designed to help managers improve their effectiveness in working with and communicating across all forms of workplace diversity. The course is based primarily on research conducted by Mary Gentile, the designer of the first diversity course at Harvard Business School. Gentile's credentials are impeccable.

As a multimedia training course, however, Managing Across Difference falls somewhat short: It's rich in text but poor in video. Too often you'll find yourself scrolling through a little window to read definitions or resource materials. You can listen to a voice read the prepared text, but that approach isn't much better.

Managing Across Difference shines in its Interactive Cases, in which actors illustrate problems such as the difference between intent and perception. The video window is small, but the material is gripping.

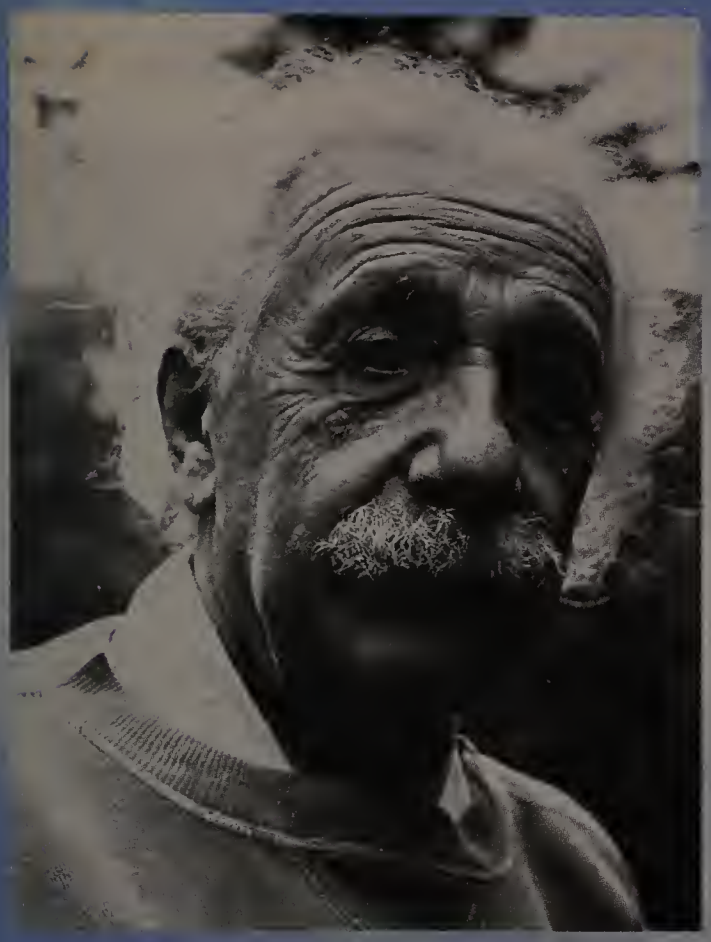
The program offers worthwhile content and requires less time and expense than an off-site seminar. But overall, this CD-ROM will work best in combination with a group discussion or speaker.

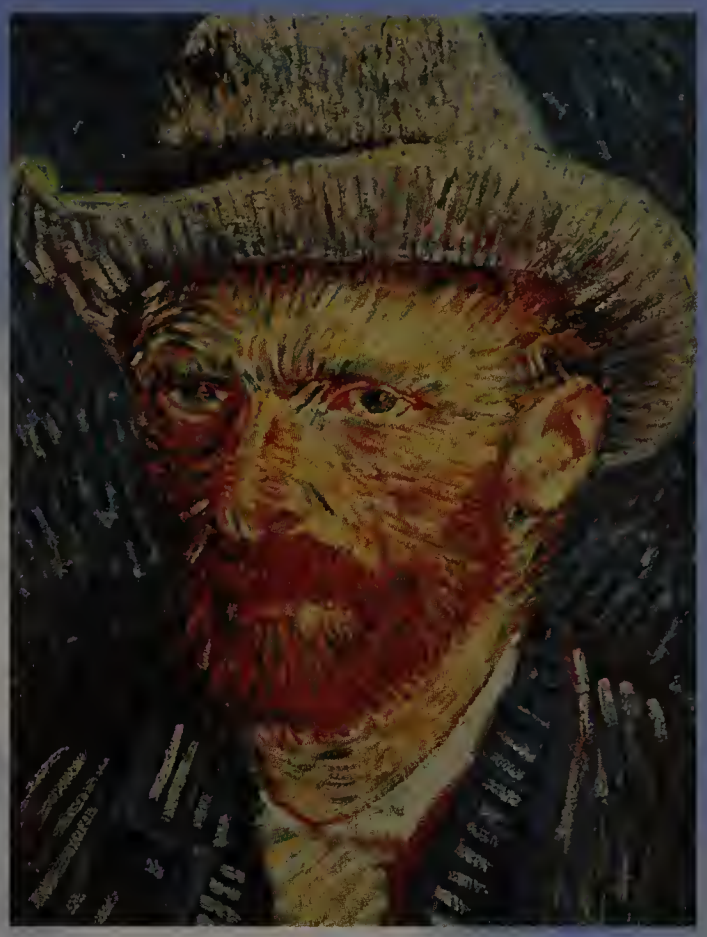
—Richard Morochove

HOT TOPIC: Managing Across Difference teaches about diversity. The disc provides good lessons, though it presents more text than video.

Managing Across Difference

A diversity training course on CD-ROM.
Harvard Business School Publishing
617/495-6700
List price: $450 per person for 25 to 49 users; volume discounts available
Reader service no. 689





ABC Graphics Suite. Because in today's business world, you're expected to be both.

ONLY $149.95*

To stay ahead, you need both the brilliant logic of Einstein, and the bold creativity of Van Gogh. And the right tools to keep up–**ABC Graphics Suite.** Three powerful programs in one package that let you diagram one minute, illustrate or image edit the next.

Microsoft® Office™ compatible and designed for Win NT and Win 95, ABC Graphics Suite gives you true 32–bit multithreading technology, plus the ease and speed of a drag and drop environment.

Powerful. Versatile. Indispensable. The software that brings the art and science of business together. ABC Graphics Suite.

Download our free Internet Graphics Pack and explore the details of ABC Graphics Suite:
www.micrografx.com

Use our automated fax back system or speak with a Micrografx representative:
1-800-562-8571

MICROGRAFX®

ABC FlowCharter® 6.0

- Simple to sophisticated business diagramming
- Over 2,000 diagramming symbols for increased versatility
- Intelligent line routing and automatic line crossovers for better readability

Micrografx Designer™ 6.0

- Precision drawing for illustration and graphics design
- Over 32,000 layers for unlimited graphics flexibility
- EPS output for better color separations

Picture Publisher® 6.0

- Fast and powerful photo retouching and image editing
- Infinite Undo™ for unparalleled creative freedom
- Object Layers™ for increased productivity

Also included:

- Instant 3D™ to easily enhance text and graphics
- ABC Media Manager™ for "drag and drop" control of all graphics, such as clipart and logos
- 30,000 pieces of clipart, images and fonts

In Canada, call 1-800-360-8464. *Canadian E.R.P. $199.95 ©1996 Micrografx, Inc. All rights reserved. All product names are trademarks of their respective companies.
Dr. Albert Einstein licensed by the Hebrew University. Represented by The Roger Richman Agency, Inc., Beverly Hills, CA.

HotPage Helps Save and Organize Information From the Web

It's tricky to save information from a World Wide Web site to include in a document or keep for future reference, but DocuMagix HotPage can help. HotPage works with Netscape Navigator versions 1.2 and above, though not with Microsoft's Internet Explorer. I tested a preproduction version of HotPage, running it under Windows 95.

HotPage adds its own commands to the Netscape Navigator menu bar. These options include HotSave, HotPrint, and a link to a "filing cabinet" feature so you can organize and store documents.

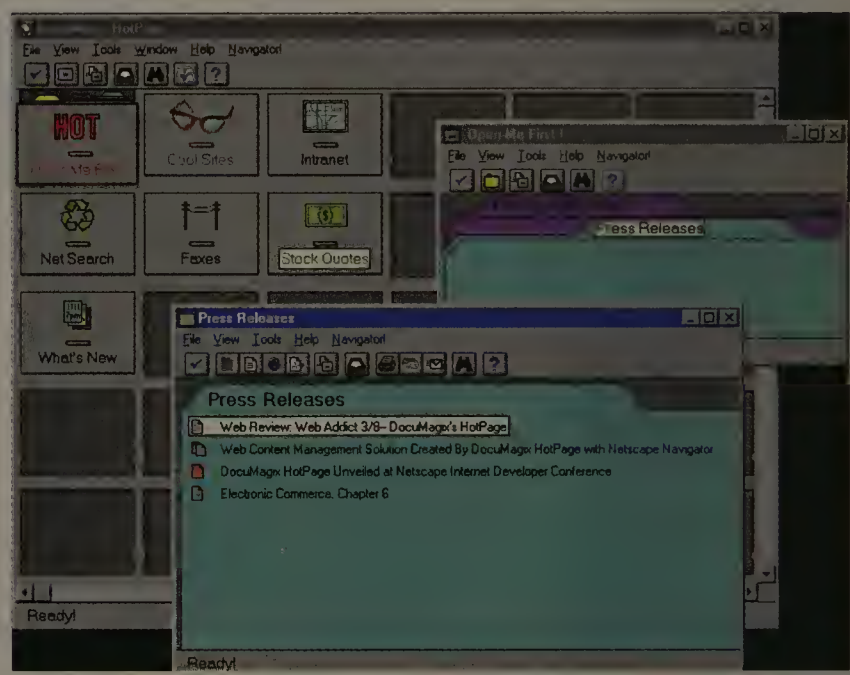
HotSaving a Web page stores it as an HTML document. HotPrint lets you save a Web page as a set of images corresponding to the paper pages you'd get if you printed the information. You view these "pages" with a graphical editor that shows thumbnail versions of each page.

This software also keeps your information organized. HotSaved or HotPrinted pages go into an "inbox"; from there you can send them to an appropriate file cabinet and folder.

On the downside, when you view a multiple-page HotPrinted document, you must click on the next page's thumbnail to view it. Also a problem: When you e-mail a HotPrinted Web page, it's sent as a series of TIFF files—one file per HotPrint page. So you'll probably choose to send only short documents. And you can't e-mail a HotSaved (HTML) version of a Web page.

Even with these limitations, I found HotPage convenient. You can preview HotPage on DocuMagix's Web site and purchase it there for $39; the retail version comes with Navigator 2.0 and costs $79.

—Pete Loshin



FILE IT: DocuMagix HotPage isn't perfect, but its file-cabinet interface helps organize documents you've taken from the Web.

DocuMagix HotPage

Save and store information from the Web.
DocuMagix, Inc.
800/362-8624
http://www.documagix.com
List price: $39 online, $79 with Netscape Navigator 2.0
Reader service no. 673

Meet Wildfire, My 24-Hour Administrative Assistant

It's inevitable: The minute I leave my home office, an important client calls. Instead of trusting messages to an answering machine, I've hired Wildfire, an electronic service that remotely takes, stores, and forwards voice-mail messages. Wildfire also answers your business phone, greeting callers with a company name. I tried Wildfire Version 1.3 for two months, and I'll keep using it.

If you run a home office or small business, you can subscribe to Wildfire. No equipment is needed, not even a PC. Costs average about $5 a day, or $150 to $200 per month, including long distance phone charges. You buy your long distance service through Wildfire service providers; I even saved money on these calls.

Wildfire also takes care of managing contacts. It reminds me of events and maintains data on up to 150 people, including their phone numbers. Setting up Wildfire and training it to recognize my voice took about an hour. To set up your contact list, you input the names and numbers by saying them or by sending a list of the information (via e-mail or floppy disk, in ASCII format) to your Wildfire provider. Unfortunately, you can't integrate Wildfire with other databases, contact managers, or personal information managers.

If I set up an itinerary, Wildfire will route calls to my home, car, or other location. I can say I'm going to be unavailable for a certain time, and Wildfire will take my messages.

When I'm on the road, I avoid those 75-cents-per-call hotel charges by placing one call to Wildfire and asking it to call a dozen clients, one at a time, simply by saying their names. If I'm out of the country, I get Wildfire to call me at a specific time: My calls are now based from the United States, so I save on overseas calling charges.

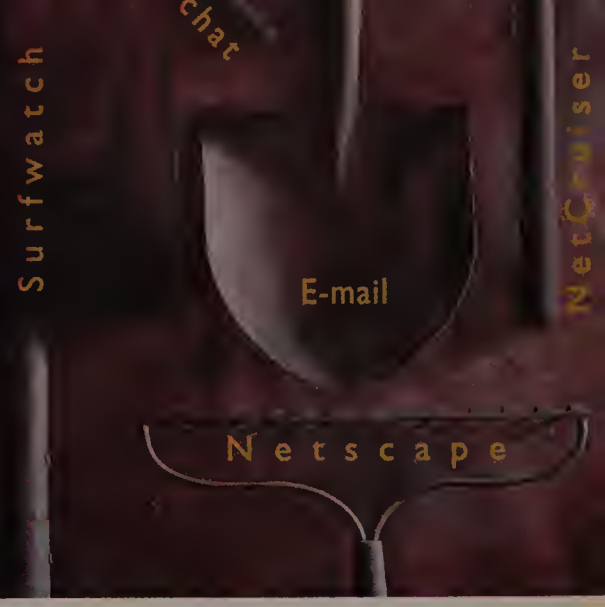
Two criticisms: The manual is skimpy, with few examples. And it's too bad I can't choose a male voice to answer calls instead of the one female voice that Wildfire provides.

—Steve Bass

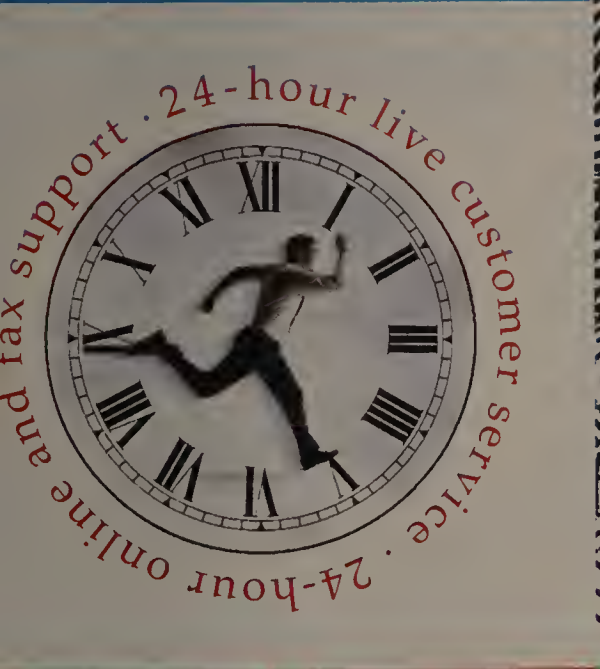
Wildfire Version 1.3

Electronic service handles calls, messages, and more.
Wildfire Communications
800/945-3347, 617/674-1500
http://www.wildfire.com
Pricing: $150 to $200 per month average, including long distance
Reader service no. 674

Introducing



NETCOMplete!



flat-rate pricing
nationwide unlimited access

free personal services:

news, investment,

research, home pages,

and more to come.

WHEN IT COMES TO

INTERNET.

NETCOMPLETE.

1-800-NETCOM-1

NETCOM

www.netcom.com

©1996 NETCOM, Inc. All rights reserved. All product and company names are the property of their respective owners.

Circle 126 on reader service card

Megahertz AllPoints Wireless E-Mail Leaves the Jack Behind

On a notebook PC user's Top 10 list of annoying problems, number two is looking for a convenient phone jack. (Number one, of course, is a dead battery.) If you spend a lot of time on the road and communicate mostly through e-mail, U.S. Robotics' new Megahertz AllPoints Wireless Modem frees you from constantly hunting for phone jacks. This small, light modem fits in a Type II PC Card slot and is powered by a 9-volt battery, so it doesn't steal power from your computer. At $499 list, it's inexpensive compared to its main competitor, the Motorola Personal Messenger, which is $799. I tested a shipping version of the Megahertz AllPoints modem, using it with a Hewlett-Packard OmniGo 100 palmtop.

The Megahertz AllPoints modem is the first product of its kind to use the RAM Mobile Data Network, a packet-based system that works like a cellular network, except that you are charged for the amount of data you send and receive rather than for your connect time. You don't run up a bill just checking for e-mail, and there are no added roaming charges. RAM Mobile says it covers more than 92 percent of U.S. urban business areas.

From RAM Mobile, your e-mail message is routed to one of two store-and-forward services, either RadioMail or Wynd. Both give you a wireless e-mail address and connect you to any Internet address. For this review, I set up a Wynd account, a process that was quick and easy. You can also send an e-mail message to a fax machine, or to someone's phone number to be delivered in voice format.

Installing the Megahertz AllPoints modem and Wynd was quick, and the Wynd e-mail interface was easy to use. On the downside, the modem itself is a bit large because the battery sticks out. Also, long messages don't travel quickly through the RAM Mobile system, which works at 8 kbps—far slower than today's 28.8-kbps modems. Nevertheless, wireless e-mail is very addicting.

—Tracey Capen

ALL POINTS BULLETIN: U.S. Robotics' Megahertz AllPoints Wireless Modem lets you send and receive e-mail without a phone jack.

Megahertz AllPoints Wireless Modem

Wireless e-mail.
U.S. Robotics Mobile Communications Corp.
800/527-8677
List price: $499
Reader service no. 675

Time Is Money: Count It Up With Caller ID Package

In the buzz about information highways, we can forget that our plain old telephones are becoming more intelligent all the time. Whozz Calling 4 is a Caller ID box and call-accounting software package that can make you look smart and save you some time. This hardware/software combo works with your PC so that when the phone rings, you see the name and number of whoever is calling. For billing purposes, the software tracks how long you speak with people who call. At $594 with software, the Whozz Calling 4 is pricey but worth it for phone-intensive small businesses that need a simple way to track phone time for billing.

The Whozz Calling 4 box, measuring 4.3 by 3.25 by 1.5 inches, connects to your PC's serial port and sits between your phone and the wall jack. I tested a shipping version of the unit, bundled with CallAudit Multiline 3.0 for Windows 95, a Caller ID program from Mountain Systems. (A Windows 3.*x* version is also available.) CallAudit works with popular contact managers to display information on your PC monitor as calls come in (the Whozz box itself does not have an alphanumeric display). You can now put all that information stored in your contact manager to good use. When your phone rings, the contact manager can pop up the record of the caller and show all your notes on that person.

To use the Whozz, you must enable Caller ID service through your regional Bell phone company; for me, this took one call to BellSouth. Exact costs vary: I paid a start-up fee of $10.50, then the regular monthly fee of $7.50. (Caller ID will be available in most parts of the country by June.)

Setting up the Whozz Calling box isn't any more difficult than connecting an external modem. But the user's guide needs some work: Its rather dry and lengthy description of the software would be improved with real-life examples.

—Pete Scisco

Whozz Calling 4

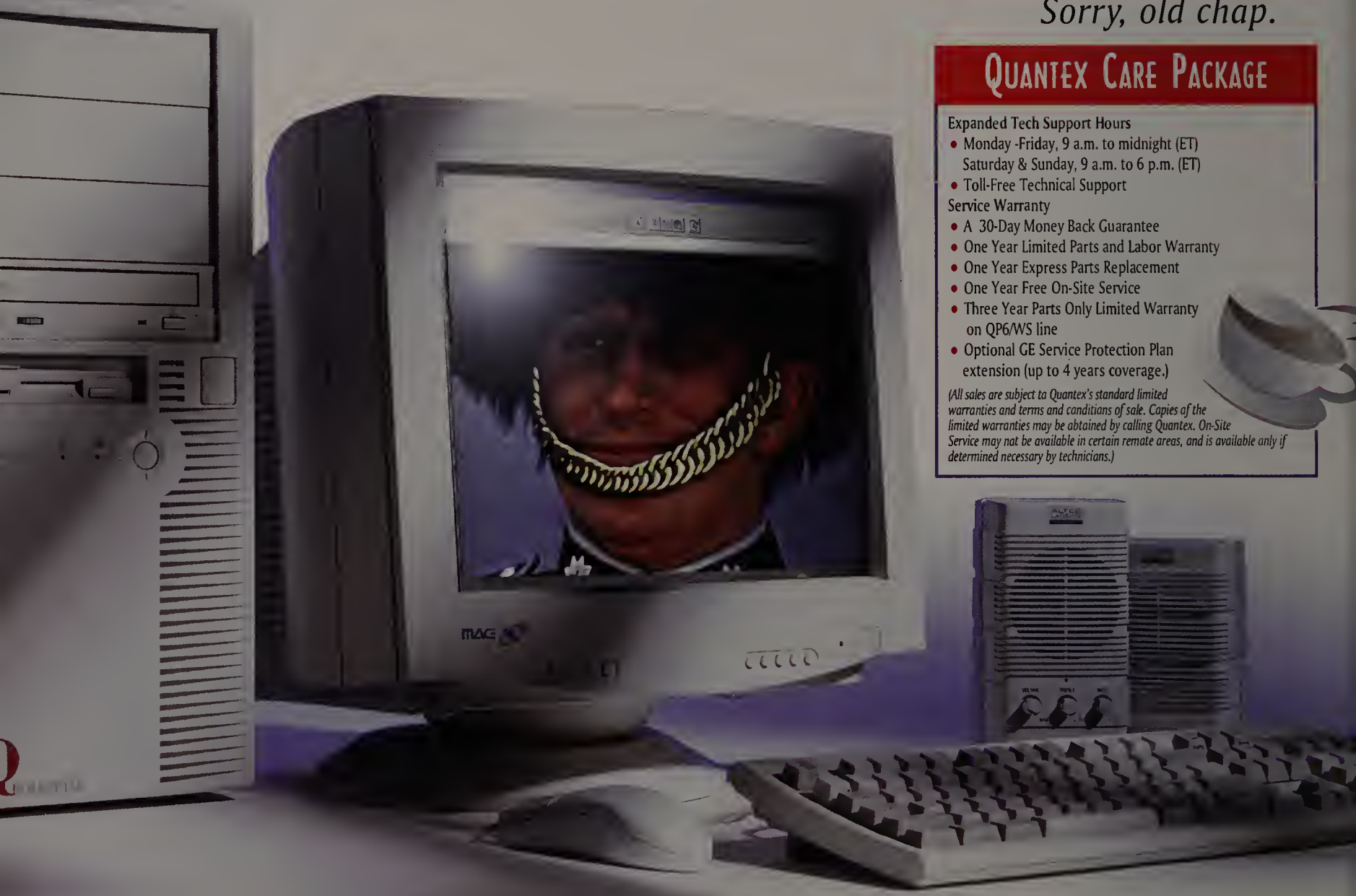
Use Caller ID and time your phone calls for billing.
Zeus PhonStuff
800/240-4637
List price: $594 with software
Reader service no. 676

Guess Who Just Got A Quantex

Quantex Makes A

Once he got his Quantex, this Beefeater knew that his days as a member of the Royal Guard were numbered. Whenever he'd think about his Quantex, he couldn't help but smile. After all, he'd just made one of the smartest buys since computers were invented. And it wasn't just the price, but the features and technology, too. Dollar for dollar, feature for feature, Quantex can't be beat. So after decades of spurning tourists trying to twist his mouth into a grin, his stony visage has fallen. If only he'd bought another brand, he'd have kept that unflappable frown.

Sorry, old chap.



Quantex Care Package

Expanded Tech Support Hours
- Monday -Friday, 9 a.m. to midnight (ET)
  Saturday & Sunday, 9 a.m. to 6 p.m. (ET)
- Toll-Free Technical Support

Service Warranty
- A 30-Day Money Back Guarantee
- One Year Limited Parts and Labor Warranty
- One Year Express Parts Replacement
- One Year Free On-Site Service
- Three Year Parts Only Limited Warranty on QP6/WS line
- Optional GE Service Protection Plan extension (up to 4 years coverage.)

(All sales are subject to Quantex's standard limited warranties and terms and conditions of sale. Copies of the limited warranties may be obtained by calling Quantex. On-Site Service may not be available in certain remote areas, and is available only if determined necessary by technicians.)

Windows Magazine 1996 Recommended

"The QP5/150 SM-2 is a brute that will keep the competition on its toes" (May '96).

Computer Shopper

"The most compelling configuration for its price remains the Quantex QP5/166 SM-2" (March '96).

1996 Editors' Choice HOME PC Top 100 Hardware

"If it's speed you're after, this QP5/100 M-4 Pentium trounces the competition" (April '96).

Newsweek

Special Edition "Computers & the Family" recognized the QP5/75 as one of the "14 Best PCs For the Long Haul."

World Of Difference

IF YOU CAN IMAGINE IT, YOU CAN DO IT WITH A QUANTEX PC.

You can be the one who establishes the Internet's first Buckingham Palace Guard Fan Club Home Page (if that's your cup of tea.) Or, buy concert tickets. Send flowers. Make a tasty bundle trading soy stocks. Fax a pizza order while fine-tuning a presentation. It can even help kids do division with an online tutor.

In a world of infinite possibilities, a Quantex PC gives you the power to do it all. Share ideas, work together, use new ways of interacting with people, places, and information. Is it easy enough for you to use? Yes. Can it grow with your needs? Yes. Fully warrantied? Yes. Affordable? Yes yes yes. So play the stock market. Or a video game. A Quantex PC makes communicating in an unlimited, immediate, and around-the-clock world effortless.

AWARD-WINNING SYSTEMS ARE OUR ADVANTAGE.

From all-in-one family multimedia to cutting-edge Pentium® Pro microprocessor power desktop systems, a chart-topping Quantex PC is the market's most rewarding purchase. That's because every system delivers better components, a stronger list of features, and more ease of use, all at a greater value. And our commitment to total quality is reflected in our top reliability ratings coupled with enhanced support. It's all done with one goal in mind: your absolute satisfaction.

QUALITY HARDWARE MAKES QUALITY SYSTEMS.

Industry-renowned components guarantee both top-flight performance and maximum reliability. So we only work with the best names in the business: Intel, Microsoft, Novell, Panasonic, Corel, Diamond Multimedia, Sony, Western Digital, MAG Innovision, Matrox, Altec Lansing Multimedia, Ensoniq, Toshiba, and STB – it's all in there. So go ahead, judge us by the company we keep. When it comes to quality, we simply won't settle for second best!

EVERY QUANTEX IS 100% NOVELL CERTIFIED.

We've gone the extra mile to ensure that every component in a Quantex has been tested and approved by Novell for NetWare compatibility. So if you plan to use your Quantex as a server or a network terminal, hooking up to your workgroup is painless.

PERFORMANCE ANIMALS CRAVE INTEL'S PENTIUM® PRO PROCESSORS.

Got a serious need for speed? For all-out performance in advanced 32-bit software, the Pentium Pro Processor can't be beat. Utilizing new Dynamic Execution processing techniques and an integrated L2 cache, Intel's newest CPU actually exceeds the performance levels of proprietary RISC workstations at a fraction of the price. And because it's fully compatible with preexisting applications yet designed for up and coming 32-bit software, this system will lead the pack for a long, long time to come. We at Quantex have incorporated the Pentium Pro processor into complete power desktop systems for the ultimate in speed, reliability, accessibility, and flexibility. So if you're looking for cutting edge, check out our Pentium Pro processor-based offerings.

HTTP://WWW.QUANTEX.COM

It's true! **Yahoo Internet Life Magazine** (5/96) recognized us as having one of the very best PC manufacturer-sites on the Web with a ☆☆☆☆ review. Now, you can consult with one of our salespeople, or access Quantex system information and specifications. Or, check out our Knowledge Base and download new software upgrades. Our site is the place to be!

New sales hours! 9 a.m. to midnight, Monday through Friday, and 9 a.m. to 6 p.m. on Saturday (ET)!

"The QP5/150 SM-2's overall performance was higher than that of all 150MHz systems, and it nearly kept pace with the 166MHz Pentium systems" (March '96).

"Quantex has the performance, value, and multimedia features to do any family proud" (May '96).

Call For The Quantex That's

Above system features QP5/SM-1

QP5/133 M-2 $1899

- Intel 133MHz Pentium processor
- Intel 430VX PCI set
- 16MB EDO Memory
- 512KB Pipelined Burst Coche
- 1.6GB 9ms EIDE Mode 4 Hord Drive
- 3.5" 1.44MB Floppy Drive
- STB PowerGroph 64-Bit 3D Video w/2MB EDO DRAM (True Color Video Ploybock)
- 15" MAG Digitol 1280x1024 Monitor
- 28.8 Fax/Modem w/Voice Mail & Speakerphone
- Toshibo 8X 160ms EIDE CD-ROM Drive
- Ensoniq 16-Bit Wovetoble Sound Cord
- Altec Lonsing ACS-5 Speokers
- Mini-Tower Cose
- 104-Key keyboord & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Fomily Softwore Bundle (preinstalled)

QP5/100 M-2.....$1799
QP5/120 M-2.....$1849
QP5/150 M-2.....$1999
QP5/166 M-2.....$2149

QP5/133 SM $1949

- Intel 133MHz Pentium® processor
- Intel 430HX PCI set
- 16MB EDO Memory
- 512KB Pipelined Burst Coche
- 1.6GB 9ms EIDE Mode 4 Hord Drive
- 3.5" 1.44MB Floppy Drive
- STB PowerGraph 64-Bit 3D Video w/ 2MB EDO DRAM (True Color Video Playback)
- 15" MAG Digitol 1280x1024 Monitor
- 28.8 Fax/Modem w/Voice Mail & Speakerphone
- Toshibo 8X 160ms EIDE CD-ROM Drive
  Upgrade to Panasonic PD/CD-ROM for $299 more
- Ensoniq 16-Bit Wovetoble Sound Cord
- Altec Lonsing ACS-5 Speokers
- Mid-Tower Cose
- 104-Key keyboord & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Professionol Softwore Bundle (preinstalled)

QP5/120 SM.....$1899
QP5/150 SM.....$2049
QP5/166 SM.....$2199

QP5/166 SM-1 $2549

- Intel 166MHz Pentium processor
- Intel 430HX PCI set
- 16MB EDO Memory
- 512KB Pipelined Burst Coche
- 2GB EIDE Mode 4 Hord Drive
- 3.5" 1.44MB Floppy Drive
- STB LightSpeed 128-Bit Video w/2MB MDRAM
- 17" .26dp MAG 1280x1024 Monitor
- 28.8 Fax/Modem w/Voice Mail & Speakerphone
- Toshibo 8X 160ms EIDE CD-ROM Drive
  Upgrade to Panasonic PD/CD-ROM for $299 more
- Ensoniq 16-Bit Wovetoble Sound Cord
- Altec Lonsing ACS-5 Speokers
- Mid-Tower Cose
- 104-Key keyboord & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Professionol Softwore Bundle (preinstalled)

QP5/120 SM-1.....$2249
QP5/133 SM-1.....$2299
QP5/150 SM-1.....$2399

QP5/200 SM-2 $3149

- Intel 200MHz Pentium processor
- Intel 430HX PCI set
- 32MB EDO Memory
- 512KB Pipelined Burst Coche
- 2.5GB EIDE Mode 4 Hord Drive
- 3.5" 1.44MB Floppy Drive
- Matrox Millennium 64-Bit 3D Video w/2MB WRAM
- 17" .25dp MAG Technitron Monitor (Bosed on Advanced Sony Trinitron CRT)
- 28.8 Fax/Modem w/Voice Mail & Speakerphone
- Toshiba 8X 160ms EIDE CD-ROM Drive
  Upgrade to Panasonic PD/CD-ROM for $299 more
- Ensoniq 16-Bit Wovetoble Sound Cord
- Altec Lansing ACS-31 Speakers w/ subwoofer
- Mid-Tower Cose
- 104-Key keyboord & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Professionol Softwore Bundle (preinstalled)

QP5/120 SM-2.....$2599
QP5/133 SM-2.....$2649
QP5/150 SM-2.....$2749
QP5/166 SM-2.....$2899

TOP VALUE

Designed for Microsoft Windows 95

intel inside pentium® PROCESSOR

*denotes 3-Year Limited Warranty only applies to the QP6/200 WS-2 workstation. CD Titles are subject to change and cannot be substituted. All returned items must have a Return Merchandise Authorization (RMA) number and must be in original packaging. The cost for returned freight is not included with any Money-Back Guarantees; shipping charges are non-refundable. Prices and product descriptions subject to change without notice. Quantex Microsystems cannot be responsible for errors in typography or photography.

Right For You

QP5/150 M-3 $2349

- Intel 150MHz Pentium processor
- Intel 430VX PCI set
- 16MB EDO Memory
- 512KB Pipelined Burst Coche
- 2GB EIDE Mode 4 Hord Drive
- 3.5" 1.44MB Floppy Drive
- STB PowerGroph 64-Bit 3D Video w/2MB EDO DRAM (True Color Video Ployback)
- 17" .26dp MAG1280x1024 Monitor
- 28.8 Fax/Modem w/Voice Mail & Speakerphone
- Toshibo 8X 160ms EIDE CD-ROM Drive
- Ensoniq 16-Bit Wovetoble Sound Cord
- Altec Lonsing ACS-31 Speokers w/Subwoofer
- Mini-Tower Cose
- 104-Key keyboard & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Fomily Softwore Bundle (preinstalled)

QP5/120 M-3.....$2199
QP5/133 M-3.....$2249
QP5/166 M-3.....$2499

QP5/166 M-4 $2699

- Intel 166MHz Pentium processor
- Intel 430VX PCI set
- 24MB EDO Memory
- 512KB Pipelined Burst Coche
- 2.5GB EIDE Mode 4 Hord Drive
- 3.5" 1.44MB Floppy Drive
- STB LightSpeed 128-Bit Video w/2MB MDRAM
- 17" .25dp MAG Technitron Monitor (Bosed on Advanced Sony Trinitron CRT)
- 28.8 Fax/Modem w/Voice Mail & Speakerphone
- Toshibo 8X 160ms EIDE CD-ROM Drive
- Ensoniq 16-Bit Wavetoble Sound Cord
- Altec Lonsing ACS-31 Speokers w/Subwoofer
- Mini-Tower Cose
- 104-Key keyboord & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Fomily Softwore Bundle (preinstalled)

QP5/120 M-4.....$2399
QP5/133 M-4.....$2449
QP5/150 M-4.....$2549

QP6/200 SM-2 $3149

Features PENTIUM® PRO PROCESSOR

- Intel 200MHz Pentium Pro processor
- Intel 440FX Chipset
- 32MB RAM
- 256KB Internol L2 Coche
- 2.5GB EIDE Mode 4 Hard Drive
- 3.5" 1.44MB Floppy Drive
- Matrox Millennium 64-Bit 3D Video w/2MB WRAM
- 17" .25dp MAG Technitron Monitor (Based on Advonced Sony Trinitron CRT)
- 28.8 fax/modem w/voice moil & speakerphone
- Toshibo 8X 160ms EIDE CD-ROM Drive
  Upgrade to Panasonic PD/CD-ROM for $299 more
- Ensoniq 16-Bit Wovetoble Sound Card
- Altec Lansing ACS-31 Speakers w/ subwoofer
- Mid-Tower Cose
- 104-Key keyboord & Microsoft Mouse
- Windows 95 with Microsoft Plus!
- Professionol Softwore Bundle (preinstalled)

QP6/150 SM-2.....$3049
QP6/180 SM-2.....$3199

QP6/200 WS-2 $4199

Features PENTIUM® PRO PROCESSOR

- Intel 200MHz Pentium Pro processor
- Intel 440FX Chipset
- 32MB RAM
- 256KB Internal L2 Coche
- 4GB Fost Wide SCSI Hord Drive
- 3.5" 1.44MB Floppy Drive
- Adaptec 2940W PCI Wide SCSI Controller
- Matrox Millennium 64-Bit 3D Video w/4MB WRAM
- 17" .25dp MAG Technitron Monitor (Bosed on Advanced Sony Trinitron CRT)
- Toshibo 6.7X 145ms SCSI CD-ROM Drive
  Upgrade to Panasonic PD/CD-ROM for $199 more
- ATX Tower Cose
- MS Noturol Keyboard & Microsoft Mouse
- MS Windows NT Workstotion 3.51
- 3-Yeor Limited Worronty*
- Upgrade to 21" MAG Monitor for $799 more

QP6/150 WS-2.....$ 3799
QP6/180 WS-2.....$ 3999

Family Software Bundle

- Novell PerfectHome: PerfectWorks; Memphis Math; Write With Me; Grammatik; Clip Art for the Home; Clip Art for the Office; Read With Me 1 & 2; PerfectWorks for Kids
- Quicken SE
- Comptons Interactive Encyclopedia
- Comptons Zoo Explorer
- Comptons Reference Collection
- BodyWorks 5.0
- Me & My World Multimedia Picture Dictionary
- New Riders Official Internet Yellow Pages & Win95 Premier Combo
- America Online, Prodigy, CompuServe (one month trial membership to on-line services)
- NetCruiser Plus (Free Internet Access of over 400 hours for one month)
- Microsoft Internet Explorer 2.0

Professional Software Bundle

- Corel WordPerfect Suite: Corel WordPerfect 7; Corel Quattro'Pro 7; CorelFlow 3; Corel Presentation 7; SideKick 95; Dashboard 95; Envoy 7; Netscape (AT&T WorldNet Services); Corel Screen Saver; 150 Fonts; 10,000 Clip Art Images
- Corel Internet Mania
- Corel Print House
- Quicken SE
- Comptons Interactive Encyclopedia
- Comptons Reference Collection
- SharkWare (Top-Selling Contact Manager)
- PFS Business Plan
- Astound (#1 in Multimedia Presentations)
- Instant Resume
- New Riders Official Internet Yellow Pages & Win95 Premier Combo
- Key Master Maps
- America Online, Prodigy, CompuServe (one month trial membership to on-line services)
- NetCruiser Plus (Free Internet Access of over 400 hours for one month)
- Microsoft Internet Explorer 2.0

Upgrade Specials

Options Available with System Purchase

- Microsoft Natural Keyboard.....Add $39
- Panasonic KX-6100 Laser Printer.....Add $349
- Conner Tape Backup 850MB..... Add $149
- Conner Tape Backup 3.2GB.....Add $199

Options Available with QP6 Workstation Purchase Only

- Sony 1.3GB Magneto Optical Drive.....Add $1299
- Conner 8GB SCSI Tape Backup..... Add $399
- Iomega Zip Drive..... Add $179

QUANTEX

1-800-896-4898

www.quantex.com

New sales hours! 9 a.m. to midnight Monday through Friday, and 9 a.m. to 6 p.m. on Saturday (ET)!

Quantex Microsystems, Inc.
400B Pierce Street, Somerset, NJ 08873

Canada 1-800-793-4167

Puerto Rico 1-800-793-4185

"Pentium and the Intel Inside logo are registered trademark of Intel Corporation". Microsoft and Windows 95 are registered trademarks and Windows NT is a trademark of Microsoft Corporation. Some of the names or trademarks shown herein may be the property of other companies. Quantex Microsystems, Inc. 1996. All Rights Reserved.

1200 dots per inch may require additional memory depending on file complexity and Optra model. 8 page per minute at 1200 dpi, 10 ppm at 300 dpi and 600 dpi. †In Canada, call 1-888-453-9226. Lexmark and Optra are trademarks of Lexmark International, Inc.

When man set foot on the moon, the impact was nothing short of earthshaking. **This important print is brought to you by Lexmark,** the people who know all about printing what's important to you. Designed to meet the needs of the world's most demanding workplaces, our Optra™ laser printers have set sky-high standards in delivering true 1200 dpi printing and 16 ppm* performance at down-to-earth prices. And we offer superior connectivity and paper handling solutions. So whether you're creating a business proposal or a restaurant menu, print it on a Lexmark printer. Because, when you think about it, the whole world is watching. For product information and a print sample, **call 1-800-891-0399, ext. 30†, or visit us at http://www.lexmark.com.**

PRINT LEXMARK™

Circle 134 on reader service card

Best Products of 1996

Your ultimate buying guide to 82 top products and companies, winners of PC World's 14th annual World Class awards.

BY ERIC KNORR

PIERRE-YVES GOAVEC

PC TECHNOLOGY normally advances at an even pace—a software upgrade here, a faster processor there, and a Microsoft conquest every few months. But over the past year we've been treated to a three-ring circus: the explosion of the World Wide Web, the ascent of home computing, and the rock 'n' roll rollout of Windows 95.

In the midst of this crazy tangle, we asked a group of informed spectators to tell us what they thought were the best and worst products and services of the year. Our nearly 2000 handpicked experts—consultants, market researchers, journalists, user group presidents, and a select group of longtime *PC World* subscribers—had ringside seats to this year's computing events. Based on a survey sent to these experts, we present the results of our 14th annual World Class awards.

Think of these results as a handbook for trying times. Many of the choices merely reflect the strong pull of tradition, such as Hewlett-Packard walking away with nearly all the printer awards or Microsoft Encarta snagging best CD-ROM reference. Other selections, such as Netscape Navigator's taking product of the year, reflect the epidemic excitement over all things Internet. (International Data Group, the parent company of *PC World*, is a minority shareholder in Netscape Communications.) But the choice that raises the most questions—and has the highest entertainment value—is of Windows 95 as unfortunate recipient of our new award for loser of

PRODUCT OF THE YEAR
Netscape Navigator

ON THE DESKTOP
The Bare Essentials of Computing **98**

ON THE ROAD
The Mobile Office **98**

THE PRINTED PAGE
Printers and Scanners **99**

MOST PROMISING NEWCOMERS
Likely to Succeed **99**

IN A WIRED WORLD
Necessities for Getting Online **100**

MOTION AND SOUND
CD-ROMs and Multimedia Hardware **100**

STORAGE
Drives in All Media **101**

SERVICE AND SUPPORT
Hardware and Software **101**

LOSER OF THE YEAR
Windows 95 **101**

APPLICATIONS
Home and Office Productivity **102**

WORKING TOGETHER
Necessities for Workgroups **102**

THE BASIC TOOLS
Utilities, Shareware, OCR **106**

GETTING ORGANIZED
Time and Money Managers **106**

MAIL ORDER
High-Tech Shopping **106**

ON THE DESKTOP

Business Desktop Computer
Gateway 2000 Professional line

Home Desktop Computer
Gateway 2000 Family PC line

Input/Pointing Device
Microsoft Natural Keyboard
Logitech MouseMan '96

Monitor 15"
NEC MultiSync XV 15+

Monitor 17"
NEC MultiSync XV 17+

Operating System/Environment
Windows 95

ON THE ROAD

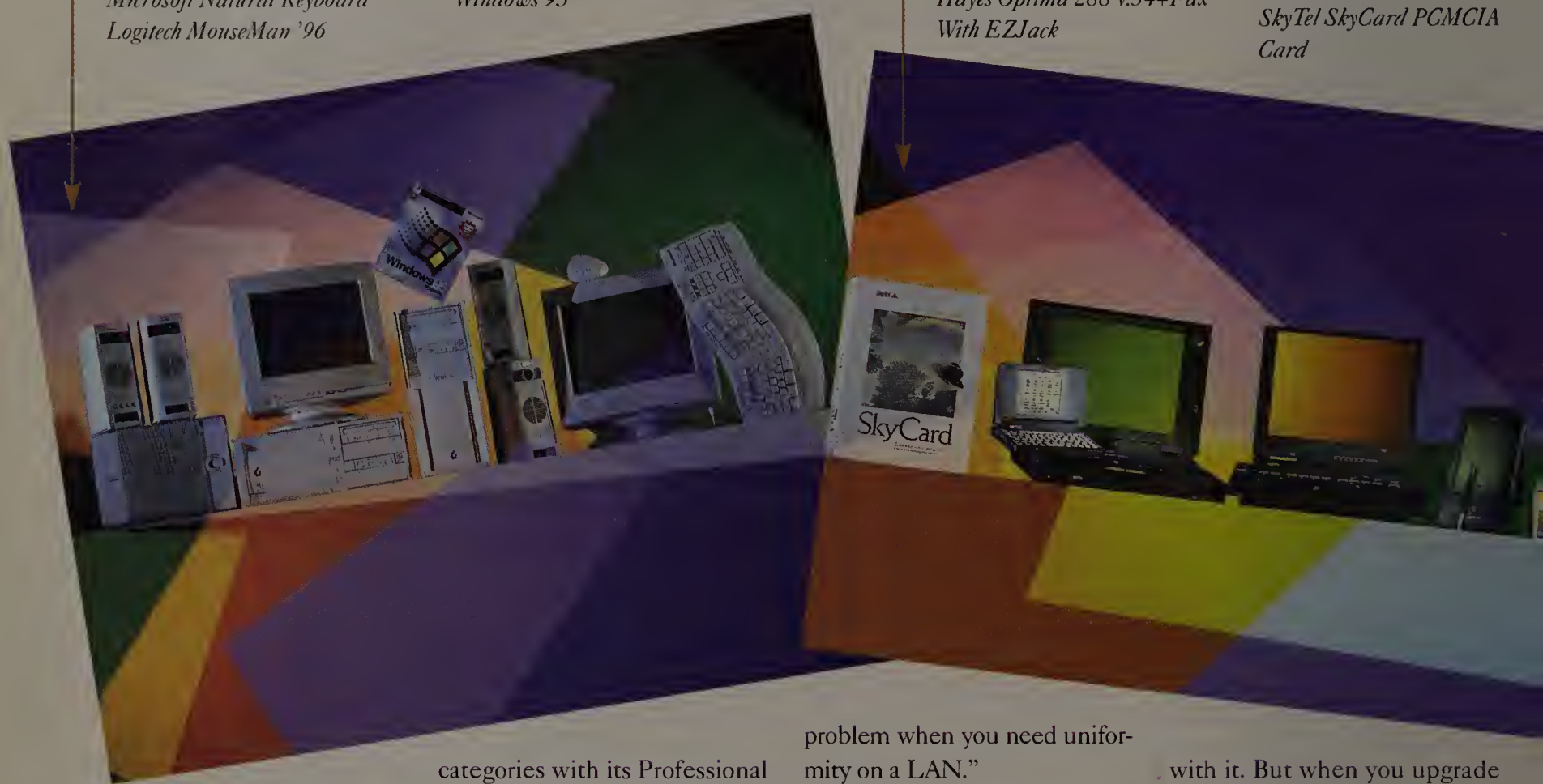
Laptop/Notebook Computer
IBM ThinkPad 755CD

Subnotebook Computer
IBM ThinkPad 701C

PC Card Modem
Hayes Optima 288 V.34+Fax With EZJack

Personal Digital Assistant
Apple Newton
HP OmniGo 100 Organizer Plus

Wireless Communications Device
SkyTel SkyCard PCMCIA Card



the year—*and* a close second for product of the year. Windows 95 was also voted best operating system/environment. This contradiction is a sure sign of the mixed feelings, thorny feuds, loathing, and admiration that Microsoft's much-hyped operating system has fueled in the world of computing. (See "Windows 95: Love to Hate It.")

The Computer Is in the Mail

When our experts turned their eagle eyes to hardware, one thing was obvious: Mail order rules. For three years straight, the top three mail-order vendors—Dell, Gateway 2000, and Micron—have landed the awards for best desktop PC. This year, after taking the top slot in two out of three previous years, Gateway 2000 swept both the business and home desktop categories with its Professional and Family PC lines. Why did our voters prefer Gateway? Apparently not for its tech support—Gateway didn't even show up on the radar in the service and support category.

Name recognition, word of mouth, rock-bottom prices, and flexibility, however, are a hard combination to ignore. "I voted based on the cost of the systems and my personal experience with the company," says Thomas Lowe, director of data automation programs at the International Trade Administration in Washington, D.C. "Gateway's strength is their ability to assemble systems in the configuration you want. But that's also their weakness: If you aren't specific, you may get several of the same model machine with different components—different video cards in particular. That can be a problem when you need uniformity on a LAN."

When the computer in question has to handle the big job of serving a network, our experts turn to companies with higher prices and bulletproof reputations: Compaq, HP, and IBM. This year HP's NetServer line and IBM's PC Server line tied for first place as best network server. Not coincidentally, our experts voted HP the best in hardware service and support, while IBM took third place in this category. Compaq, whose ProLiant 2000 was champion of the network servers last year, slipped a bit this time around. The ProLiant line came in second place for best network server, with Compaq in fourth place for tech support.

The Face of Things

When you buy a PC, you probably use the monitor that comes with it. But when you upgrade your display, you shop for quality. That's one reason NEC's MultiSync XV line won in both the 15- and 17-inch categories. NEC has been building a reputation for quality monitors since the first MultiSyncs, and its reputation has defended it in the face of stiff competition. Although other monitors have often earned Best Buys in *PC World*'s Top 10 roundups, NEC wins here. Price seems the only factor that can sway consumer loyalty: Last year, NEC's long World Class winning streak was broken by lowballer ViewSonic; this year, with the budget-priced MultiSync XV line, NEC regains its title.

But a new monitor without a new graphics card is only half an upgrade. For the third year in a row, Diamond Multimedia grabbed the award, this time

THE PRINTED PAGE

High-End Color Printer
Epson Stylus Pro/Pro XL
Tektronix Phaser 340

Personal Color Printer
HP DeskJet 850C/855C

Personal Monochrome Printer
HP LaserJet 5/5M

Multifunction Device
HP OfficeJet LX

Scanner
HP ScanJet 4c

MOST PROMISING NEWCOMERS

Hardware
Intel Pentium Processor 166
Intel Pentium Pro Processor
Iomega Zip drive

Software
Netscape Navigator 2.0

NEW ARRIVALS SHARE THE GLORY

One important category this year left our experts unable to make up their minds: most promising hardware newcomer. So the Iomega Zip drive and the Intel Pentium Pro and Pentium-166 processors had to share this coveted title. Leaving aside the Zip (everyone seems to love that little drive), why the ambivalence between the two processors? After all, the Pentium Pro can brag about a lot more new technology than the Pentium-166 can—including a built-in secondary cache and beefed-up logic for executing instructions in parallel—which means that you should get a lot more speed out of this processor.

In fact, the Pentium Pro *is* faster than the Pentium-166—but only when all your software is truly 32-bit. And there's the rub: Neither Windows 3.*x* nor Windows 95 is a full 32-bit environment. Only people who are running all 32-bit applications and a true 32-bit operating system, such as Windows NT, will witness the full power of the Pentium Pro. Oh sure, on a Pentium Pro you'll get incremental speed benefits over a P-166 when using 32-bit applications under Windows 95. (For test results, see "P6 Faster—and Slower—Than Pentium," October 1995.) But for most of us it's not worth the extra cash outlay it takes to get our hands on a Pentium Pro system.

And the Pentium Pro is actually slower than the Pentium-166 when running 16-bit applications—which, if the winners in the software application categories are any indication, most people are still using. Even Intel admits that it doesn't expect the Pentium Pro to be a mainstream product until 1997, when presumably we'll all be running Windows NT or a true 32-bit version of Windows 95. If this sounds like a stretch—even for Bill Gates's marketing team—that's the reason the Pentium Pro wasn't the sole winner in this category.

For today, the Pentium-166 delivers plenty of power to keep most of us happy, and it remains the choice of true speed lovers. You pay a premium for the P-166, even though it's only about 10 percent faster than a P-133 (because its bus stays fixed at 60 or 66 MHz). But you always pay more for the fastest mainstream CPU. By the time you read this, the Pentium-200 probably will have shipped, and Pentium-166s will suddenly be the hottest bargains around. —*E. K.*

with its Diamond Stealth64 Video 3200. Never mind that Diamond has a reputation for shaky drivers—and that its Windows 95 drivers won't help (see June's "Graphics Boards: Speeding Down Highway 95"). Forget, too, that there's a Web site called Diamonds Aren't Forever that's devoted to gripes about the company's Viper card. With graphics cards, it's price and performance that score big points, and Diamond plays that game very well.

Have a Few for the Road

IBM was merely a fifth-place finisher in desktops—but when it comes to notebooks it stole the show. This year, for the first time, IBM machines thumped the competition by taking awards for both best laptop/notebook computer *and* best subnotebook computer. The durable ThinkPad notebook line, which sent the competition fleeing in 1994, won once again, this time with the multimedia ThinkPad 755CD.

The IBM ThinkPad 701C, the subnotebook with the amazing unfolding "butterfly" keyboard, was also voted the best of its breed. Patricia Hill, editor of the user group newsletter *Computer Booters* in Sun Lakes, Arizona, notes that the ThinkPad's design is "the most user-friendly I've run into. And I know IBM stands behind its notebooks, replacing them quickly if anything breaks."

In bestowing the award for best personal digital assistant—that smallest of mobile computers—our experts were divided across platforms. Yes, the Apple Newton tied with Hewlett-Packard's OmniGo 100 Organizer Plus (the successor to the HP100LX) for best PDA. Those inclined to chuckle at *PC World*'s endorsement of the much-maligned Newton might want to check out the latest model, which includes version 2.0 of the Newton operating system; it offers vastly improved

IN A WIRED WORLD

Online Service
America Online

Web Site
Yahoo

Internet Service Provider
Netcom

Fax-Modem
Sportster 28.8 Faxmodem (U.S. Robotics)

Fax Software
WinFax Pro 7.0

Communications
Procomm Plus 3.0 for Windows

LAN E-Mail Package
Lotus cc:Mail for Windows

Remote Access/Remote Control
Norton pcAnywhere-32

Internet Interface/Utility
Netscape Navigator 2.0

Web Authoring Tool
Microsoft Internet Assistant

MOTION AND SOUND

Graphics Accelerator Board
Diamond Stealth64 Video 3200

Sound Card
Creative Labs Sound Blaster 16

Multimedia Upgrade Kit
Creative Labs Discovery Multimedia Upgrade Kit

Business Tool
Microsoft Office for Windows 95

Children's Education CD-ROM
Microsoft Encarta

Adult Education CD-ROM
Microsoft Encarta

Reference CD-ROM
Microsoft Encarta

Entertainment CD-ROM
Microsoft Cinemania

CD-ROM Game—Adults
Myst (Broderbund)

CD-ROM Game—Children
Where in the World Is Carmen Sandiego? (Broderbund)

handwriting recognition, not to mention support for more than 1000 software applications. Our experts know a cult favorite when they see one.

The hottest piece of mobile hardware this year isn't a laptop computer or a handheld device at all. Iomega's Zip drive was voted the best removable portable drive, and it tied with Intel's Pentium Pro and Intel's Pentium-166 for most promising hardware newcomer (see "New Arrivals Share the Glory"). Everyone loves this little one-pound device with its 3½-inch, 100MB cartridges and slick software. The Zip drive isn't the speediest removable storage product available, but as a portable personal data vault, this $200 drive is hard to resist.

The Need to Print

Despite all efforts to the contrary, most of us still create gobs of unnecessary printouts that fill up our recycling bins. And the temptation to click the print icon is greater than ever with the latest crop of printers. Take this year's winner for best personal color printer, the HP DeskJet: For around $500 you get superb color output, crisp 600-dpi text, and excellent software controls.

It's no surprise, then, that Hewlett-Packard took awards in almost every printer category. Because of their high prices, HP's printers don't come out on top in every *PC World* review, but they almost always place. And with readily available supplies, reliable construction, excellent technical support, and standard-setting features, the company has developed a loyal group of customers. That's why HP printers have won World Class awards year after year. Gregory Dow, president of Splash, a user group in Berkeley, California, speaks for many: "From what I've seen, HPs consistently have the best output quality. The machines are well designed and well built." Asked about the warranty and technical support, Dow replies, "I've never had a need for either."

Even in a brand-new category, best multifunction device, HP's OfficeJet LX was the favored all-in-one printer, copier, and fax machine—the hottest hydra of the home office. And at the paper-munching end, the HP ScanJet 4c took best scanner—continuing a three-year ScanJet winning streak. If it has to do with paper, it seems, HP rises to the top of the heap.

However, in one paper-related category, workgroup monochrome printers, it might be worth your while to look beyond HP brand loyalty. The second-place finisher, the Lexmark Optra line, has earned a Best Buy in every *PC World* printer roundup since February 1995. The sleek Optra R+, for example, sells for nearly a third less than the HP LaserJet 5M

STORAGE

Hard Drive
Western Digital Caviar AC31600

Removable Portable Drive
Iomega Zip drive

Tape Backup Drive
HP Colorado T1000-E

CD-ROM Drive
NEC MultiSpin 6X

Writable CD-ROM Drive
HP SureStore CD-Writer 4020i

Optical Drive
Pinnacle Micro Apex

SERVICE AND SUPPORT

Hardware
Hewlett-Packard

Software
Microsoft Corporation

LOSER OF THE YEAR

Windows 95

Plus while offering faster printing and sharper output.

Multimedia Goes Home

Do you really need multimedia at the office? Face it, you're not really going to use those $100 speakers to listen to voice mail. Serious hardware is for games, learning, and reference titles. In fact, multimedia for the home is the driving force behind today's hardware advances.

CD-ROM titles have a reputation for being here today, gone tomorrow, but Microsoft Encarta has had remarkable staying power. This multimedia encyclopedia stomped the competition for the third year in a row, this time garnering three titles: best reference CD-ROM, best children's education CD-ROM, and best adult education CD-ROM. In addition, Broderbund's Myst enjoyed its second year as most popular CD-ROM game for adults. The nearest competitor, Doom 2, ranked a distant second (maybe because our respondents didn't want to admit to their darker urgings).

Proving their dedication to the cause, our experts chose the fastest CD-ROM drive available to spin these discs: the NEC MultiSpin 6X. But the most interesting pick in this category was number three, the NEC

WINDOWS 95: LOVE TO HATE IT

We weren't surprised that Windows 95 was hailed as the best operating system/environment by our panel. But how could this same group of experts name it loser of the year? To plumb this marvelous contradiction, we interviewed a random sample of experts who'd given Windows 95 the thumbs-up, along with an equal number who gave it the thumbs-down.

Everyone we spoke to who pinned "loser" on Windows 95 complained about Microsoft's big buildup. Some, such as Paul Hethmon, a programmer and analyst for the University of Tennessee, felt let down by the operating system. "There was a lot of hype about what Windows 95 was going to be, and it just didn't live up to it."

David Wollrich, a senior consultant for CompuConsult of Fairfield, California, was disappointed, too. "I don't think Windows 95 advances computing as much as Microsoft claimed it would. It hasn't yet achieved the ease of use of the Mac."

Several of our experts also felt that Windows 95 had been shipped prematurely. "Windows 3.1 and its applications worked fine on our network," says Dave Mackay, network administrator for Land o' Lakes of Fort Dodge, Iowa. "Windows 95 and its applications did not. Our workstations were crashing all over the place." According to *Computer Boosters* newsletter editor Patricia Hill, "Microsoft should never have released Windows 95 without tape backup support."

Made cautious by negative criticism, many of our experts delayed upgrading to Windows 95 and its applications. In fact, given the choice between Windows 3.1 and Windows 95 versions of Word and Excel, our respondents chose the Windows 3.1 versions.

> Everyone who pinned "loser" on Windows 95 complained about Microsoft's big buildup.

Ultimately, it all boils down to personal experience. "For me, the switch was seamless," says Scottsdale Automation's treasurer, John Smith of Phoenix, Arizona, who voted Windows 95 product of the year. "I took the plunge and converted almost entirely to 32-bit applications, and I'm very pleased." Joyce Madden, founder and president of Computer CACHE, a Denver user group, offers a viewpoint often cited by Windows 95 fans. "It's a step in the right direction for people who aren't computer literate," says Madden. "My husband doesn't know much about computers. With Windows 95 he can do anything he wants."

Bruce Freeman, president of the Northeast Technical Association in Livingston, New Jersey, selected Windows 95 as product of the year because he feels that the interface changes are significant and that everyone will upgrade eventually. "Windows 95 isn't merely a new application that changes only part of the way we compute," he says. "It's changing the totality of the way we compute." —*E. K.*

APPLICATIONS

Word Processor
Microsoft Word 6.0

Spreadsheet
Microsoft Excel 5.0

Database—Personal
Microsoft Access

Database—Professional
Microsoft Access

Applications Suite
Microsoft Office 95

Desktop Publishing
Adobe PageMaker 6.01

Presentation Graphics
Microsoft PowerPoint

Draw Software
CorelDraw 6.0

Computer-Aided Design
Autodesk AutoCAD R13

3-D Graphics
Autodesk 3D Studio 4.0

Image Editing/Paint
Adobe Photoshop 3.05

WORKING TOGETHER

Groupware Application Environment
Lotus Notes release 4

Group Discussion
Collabra Share 2.2

Document/Video Conferencing
Intel ProShare Video Conferencing System 200

Electronic Document Distribution
Adobe Acrobat 2.1

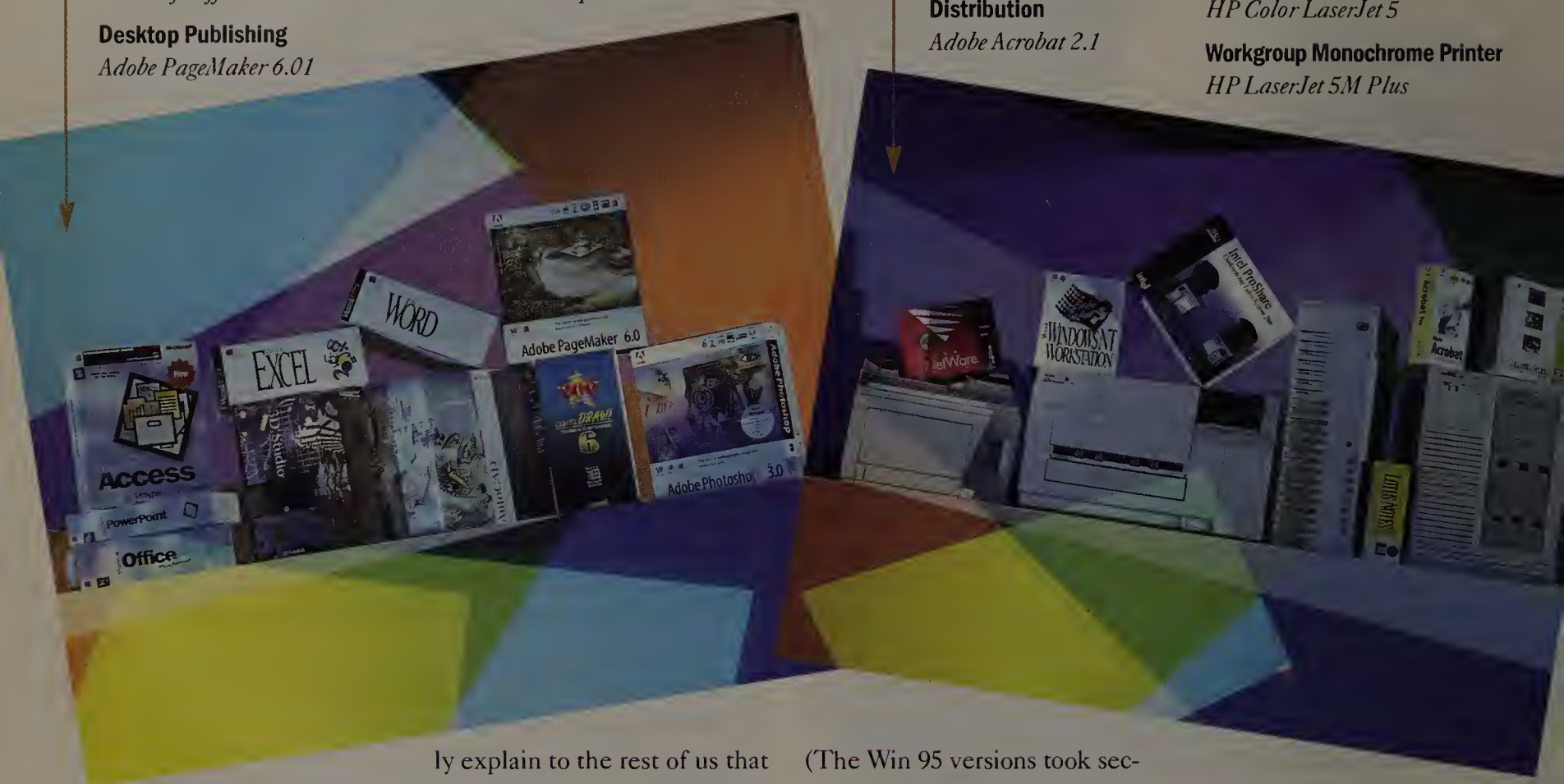
Network Server
HP NetServer line
IBM PC Server line

LAN Operating System (Peer-to-Peer)
Microsoft Windows NT

LAN Operating System (Server-Based)
Novell NetWare 4.1

Workgroup Color Printer
HP Color LaserJet 5

Workgroup Monochrome Printer
HP LaserJet 5M Plus



MultiSpin 4x4, a $250 drive that spins four discs at quad speed. Since there's little real-world performance difference between 4X and 6X CD-ROM drives, the convenience and low price of the Multispin 4x4 make it a hot deal.

When it comes to PC sound systems, it seems the name Creative Labs is on the tip of everyone's tongue. A Sound Blaster board again dominates the sound card category, while the company's Discovery Multimedia Upgrade Kit (sound card, CD-ROM drive, software bundle, and speakers) was undefeated for the third straight year. While audiophiles may patiently explain to the rest of us that sound cards from such companies as Turtle Beach and Ensoniq have better fidelity, those products lack the attractive pricing and—especially important for DOS CD-ROM games like Myst—the compatibility of the popular Sound Blaster line.

The 800-Pound Gorilla Is Still Hungry

Can anyone break Microsoft's hold on business applications? Is there any point in even hoping for a close game anymore? This year, Word for Windows was voted best word processor, while Excel claimed best spreadsheet. Interestingly, the Windows 3.1 versions of both Word and Excel each edged out the Windows 95 versions for first place. (The Win 95 versions took second place, though.) The nearest competitors, Lotus 1-2-3 and Novell's WordPerfect, took third place in their respective categories, each gathering only around 25 percent of the votes.

Microsoft Access, a slick database application that targets both developers and casual users, was endorsed by about two-thirds of our experts as the best personal database, and it also won in the professional database category. (The second-place finisher among professional databases was Borland's Paradox.) And Microsoft made yet another conquest this year: For the first time, PowerPoint took the presentation graphics category, handily beating Harvard Graphics for Windows 95. Of course, PowerPoint comes along for the ride when you buy Microsoft Office. And no one was surprised that Microsoft Office 95 was the winner in the applications suite category.

Step a little outside mainstream software, however, and Microsoft's world dominance ends. Adobe PageMaker still leads in our desktop publishing category, despite a new Windows 95 version of Microsoft Publisher. And lacking any Microsoft competition, CorelDraw claimed the draw software category for the fifth year running. So far, Microsoft hasn't ventured into computer-aided design software, so AutoCAD—which

16.7 million colors, yet it goes with everything.

Introducing the network compatible, Color Laser Beam Printer 360PS.

You want a color laser printer that stands out. But it's got to go with your network, right? Then the new Color Laser Beam Printer 360PS from Canon is the perfect match for your business.

The Canon C LBP 360PS puts all 16.7 million colors of the rainbow within your reach. It's plug 'n' play, and connects easily with Macintosh,® Windows™ and UNIX operating systems, plus Ethertalk, TCP/IP, and Novell® IPX networking environments. Innovative Fiery XJ Downloader™ and Spooler™ software give you unmatched flexibility when downloading PostScript™ files and managing network printing. Which means while you print, your computer is free to go on to the next job.

Adobe PostScript

And because Canon's the leader in laser technology, you'll see vivid, continuous tone color at blinding speeds. With the built-in Fiery™ XJE™ controller, the C LBP 360PS prints out 3 full-color pages per minute, with a resolution of 600 dpi. Plus, it feeds letter-or legal-size paper with a capacity of up to 600 sheets. In fact, the C LBP 360PS makes color printing so efficient, it can't help but make you look good.

fiery driven

So if you're looking for a high-quality, color laser printer to go with your network, we have the system that is the solution. The C LBP 360PS from Canon. For more information, just call **1-800-OK-CANON.** Or visit us on the Web at **http://www.usa.canon.com**

Macintosh is a registered trademark of Apple Computer, Inc.
Fiery, Fiery XJ Downloader, Fiery XJ Spooler and XJE are trademarks of Electronics for Imaging, Inc.
PostScript is a trademark of Adobe Systems Incorporated, registered in the U.S. and other countries.
Novell is a registered trademark of Novell, Inc.
Windows is a trademark of Microsoft Corporation.
©1996 Canon U.S.A., Inc.

Canon

Is It World Class Yet?

There's one key point to remember about beauty contests and elections: Somebody has to win, even if the winner is ugly or crooked. Last year, what did our panel of experts crown as product of the year? IBM's OS/2 Warp, a product so hopelessly doomed that its PowerPC version, long in development and once strategically crucial, was finally abandoned before its release.

Don't blame me. I didn't vote. The editors left me off the panel again this year. Instead, they handed me the task of pontificating on Things to Come. So here's my quick take on the World Class awards of 1997: Hardware will get faster, smaller, and cheaper. Software won't.

I'm sticking my neck out a bit with that software prediction. Only a bit, though. Even if all the hype about the Java programming language is to be believed, software won't get faster. But according to the hypesters, it could get smaller and cheaper, because clever developers will write compact, sleek applications that people will rush to download from the World Wide Web.

I'm not holding my breath. Programming languages rarely change the course of history. When programmers have good ideas, they figure out a way to write them up. The mere arrival of a new language is unlikely to unleash a torrent of creativity. We'll soon see if Java delivers the gusto or just the jive.

When it comes to computers themselves, the excitement is likely to be found in smaller, lighter, modular portables with plenty of battery life and prices somewhere below the stratosphere. Now that I've fondled IBM's Palm Top PC 110, a 1.6-pound computer the size of a paperback novel and available only in Japan, I want a tiny machine. It has to have a decent keyboard, though; that unit doesn't.

Otherwise, next year's most important hardware essentially will fall into two categories: peripherals and their connections. For years the built-in, daisy-chainable SCSI port on every Macintosh model has meant that connecting stuff like scanners and outboard disk drives was trivial. On PCs, where there are no standard high-speed connectors and always a shortage of ports, we're forever trying to hook up new devices on the cheap. Want some bad examples? Try tape drives that connect to a PC's lethargic floppy-disk controller.

So here come two solutions: the Universal Serial Bus and IEEE 1394. USB is for slower devices like keyboards, modems, and mice, while 1394 is for high-bandwidth stuff like hard drives. USB is cheaper, so we'll likely see it first, but we'll probably like 1394 more because faster is always better.

> As with politics, somebody has to win, even if the winner is ugly or crooked.

I've written before about the promise I see for DVD, the high-capacity optical disk format embraced by the computer and movie industries. When it comes to consumer electronics, I like cheap, and I like DVD's chances. Other winners in the world of removable mass storage are inevitably magnetic and proprietary but cheap (Zip) or standard and optical but expensive (magneto-optical). Since I like cheap, I see next year's likely comers as the speedy removable 1GB disks from Iomega and SyQuest; Panasonic's slower 650MB phase-change PD-CD drive; and perhaps most likely to succeed, the LS-120 drive (currently available in some Compaq machines) that can read and write standard 1.44MB disks and new 120MB disks.

BY STEPHEN MANES

Will ISDN or cable modems be World Class next year? Only if we devote a category to them. So far, ISDN doesn't seem to be enough of an improvement over standard modems to make it worth its higher price and setup hassle. Cable modems achieve stunning throughput in small-scale demos, but most experts see problems making them work in the real world.

And on the Internet, you're deliriously happy when you actually manage 2400-bps throughput even with your 28.8-kbps modem. Most of the time you sit through "Waiting for connection" and "Opening such-and-such" messages. Maybe next year there'll be categories for "Fewest Delays on a Web Site More Than 15 People Visit Regularly" or "Speediest Site Containing Only Self-Promoting Blather."

And if there are, remember: Just as in politics, somebody has to win.

KAREN MOSKOWITZ

has had a stranglehold on the category ever since Autodesk founder John Walker decided that drafting on the PC was a neat thing to do—seems secure enough. In image editing/paint, Adobe Photoshop has triumphed ever since we introduced the category four years ago.

Other areas yet to be conquered by Microsoft are those where Lotus holds the throne. Lotus Notes bagged over half the votes to win the groupware application environment category; Microsoft Exchange, part of Windows 95, could muster only about a quarter of the votes. And even though Microsoft Mail comes with Microsoft Office, Lotus's cc:Mail for Windows remains unbeaten in the LAN e-mail package category.

But the victory that will really rankle Bill Gates is that of Intuit's Quicken 5, which trounced Microsoft Money in the personal finance category. Microsoft's

"Of the three programs tested only UnInstaller did not offer to remove crucial Windows files."

— PC MAGAZINE ONLINE, FEB. 26, 1996
(After reviewing UnInstaller,™ CleanSweep® and Remove-It.®)

Only UnInstaller™ from MicroHelp gives you absolute peace of mind to safely clean-up your hard drive. With its exclusive SmartLinks™ technology, UnInstaller performs an intelligent series of scans on your hard drive until it thoroughly understands the inter-relationships of files and programs. Without this technology, even an experienced user may find it easy to accidentally remove a crucial file.

Designed for Microsoft® Windows® 95

Microsoft® Windows™ Compatible

Despite popular belief, Windows 95 applications aren't very thorough at automatically removing themselves from your hard drive. Regardless of which version of Windows you use, you need UnInstaller to continually clean things up. UnInstaller Works with both 16-bit and 32-bit applications.

And, as an added safety net, UnInstaller automatically compresses and backs-up everything it removes. So, as you clean off bits and pieces of old files, you can take comfort in being able to put things back exactly as they were with the simple click of a button.

Of course, with other deletion programs you can have the experience of getting rid of things you never meant to get rid of. Which may be good for us, but bad for you.

It's what you don't see on your hard drive that causes problems. Every application puts bits and pieces of itself in places you don't know about. Without UnInstaller, things can slow down — or come to a screeching halt.

Why take your chances with just any old clean-up program? UnInstaller is the No. 1-selling Windows utility on the market with more than a million copies sold.

1-800-922-3383

Available at your local software store.
MicroHelp is at www.microhelp.com

Circle 153 on reader service card

PowerDesk, the highly acclaimed file management and desktop enhancement utility that truly unleashes the hidden power of Windows 95, is also a MicroHelp product.

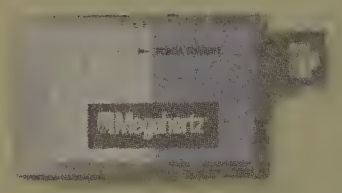
©1996 MicroHelp, Inc. All rights reserved. UnInstaller, PowerDesk and SmartLinks are trademarks of MicroHelp, Inc. All other trademarks are properties of their respective owners. Windows is a registered trademark of Microsoft.

MicroHelp

HEY, EVERYONE CAN USE A LITTLE HELP.

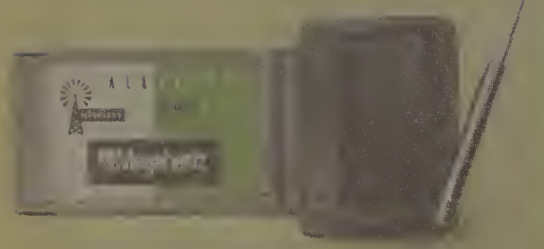
28.8 PC Card Modem With XJACK.®

Cellular Direct Connect.
Digital Line Guard.
Home Office Implosion Avoidance.



PC Card Ethernet Adapter With XJACK.®

28.8 Ethernet+Modem With XJACK.



AllPoints Wireless PC Card.

it is human
to return from a
with little soaps

it is human nature
luggage too big to fit in
under the seat in

it is human nature
office will implode if
for more than

we can help with
of human

The XJACK connector is U.S. Patent Nos. 5,183,404, 5,336,099 and 5,338,210, property of US Robotics Mobile Communications Corp. ©1996 US Robotics Mobile Communications
with you" are trademarks of US Robotics Mobile Communications Corp. Megahertz is licensed by Spectrum

nature
business trip
and shampoos.

to carry on
the overhead bin or
front of you.

to think the
you're out of touch
two hours.

some parts
nature.

It is human nature to want to communicate at any time, from anywhere. And in this respect, the business traveler is just a bit more human than most.

With that in mind, Megahertz presents the 28.8 PC Card Modem. It's designed to be compatible with you and the way you work.

Our newest innovation, Cellular Direct Connect with Cable Sensor, lets you stay connected no matter where you are, without configuring hassles. The patented XJACK® connector means you'll never have to carry (or lose) another cable for the rest of your business-traveling life. And Digital Line Guard actually warns you if you're about to fry your modem by plugging into a digital PBX phone line. (We all know how bad frying things can be.)

The end result is you'll always be in touch. Of course, first you'll need to be in touch with us. Just call 1-800-LINKING, ext. 4333. Or find us on the Net at www.megahertz.com/patible.

Compatible with you.

Circle 138 on reader service card

Corp. Megahertz, the Megahertz logo and XJACK are all registered trademarks of US Robotics Mobile Communications Corp. AllPoints and "Compatible
Information Technologies, Inc. It is human nature to always read the fine print.

THE BASIC TOOLS

Utility Collection
Norton Utilities for Windows 95 (Symantec)

Windows Shell
Norton Navigator for Windows 95 (Symantec)

OCR Software
Caere OmniPage Pro 6.0

Shareware/Freeware
PKZIP version 2 (PKWare)

Backup Software
HP Colorado Backup for Windows 95

Program Language/ Development Tool
Microsoft Visual Basic v. 4.0

Forms Software
FormFlow 2.0 (Symantec/ Delrina)

GETTING ORGANIZED

Personal Information Manager
Lotus Organizer 2.1

Contact Manager
Symantec Act 2.0 for Windows

Project Manager
Microsoft Project for Windows 95

Accounting
Intuit QuickBooks 4.0

Personal Finance
Intuit Quicken 5 for Windows 95

Tax Planning/Preparation
Intuit TurboTax

MAIL ORDER

PC Connection

attempt to buy Intuit, foiled by the Department of Justice, was a de facto acknowledgment of Money's weakness. Intuit's QuickBooks won for accounting, while the company's TurboTax grabbed the tax planning/preparation category. Talk about the one that got away—and in a consumer and home-office market that Bill would love to get his hand on.

The Wide, Wide World of Computing

This year the center of the computing universe began its shift from your desk to somewhere out there in cyberspace. Who cares whether what you're doing out there is productive?

This time around we added a number of categories to acknowledge this momentous change. For the best Web site, our experts chose Yahoo, the most popular index to Internet attractions. Netcom, one of the largest of the companies providing a line to the Net, took nearly half the vote in the Internet service provider category and was the winner. And in our online service category, America Online for the first time unseated CompuServe, reflecting a shift from a service favored by nerds to one mostly geared to home users in search of fun.

The year's big winner also embodies computing's new wired perspective. It's no surprise that Netscape Navigator won for best Internet interface/utility. But the browser was also voted most promising software newcomer—not to mention the big kahuna of all, product of the year.

Some of our experts admitted that they gave Navigator the year's biggest honor because of Netscape's outrageous Wall Street performance. But others clearly had admiration born of experience. "I felt it was the kind of product that went beyond the hype. I see it as a product that is well thought out, very usable, and deserving of any accolades it gets," says Chester Freedenthal, a computer consultant in Alexandria, Virginia. Jim Porter, director of operations for Xplor International,

METHODOLOGY

We mailed ballots to 1900 *PC World* subscribers, consultants, computer professionals, and user group presidents and asked them to vote on the products that *PC World* editors nominated for World Class awards. When there was a difference of 1 percent or less in the number of votes a product received, we called it a tie. In write-in categories with fewer than 100 total votes, the winning product was required to have a lead of only one vote. (Write-in categories generally received a small number of votes among many products, which made it difficult for any single product to achieve a significant lead.) Thanks to *InfoWorld* for supplying the Computer Professional portion of the voting sample and to the User Group Connection for providing the list of user group presidents.

THE NEW TI EXTENSA 510. GET 100MHz WITHOUT PAYING MEGABUCKS.

EXTENSA 510

- 100MHz Pentium® processor with PCI bus
- 8MB RAM, upgradeable to 40MB
- 810MB Removable HDD
- 10.4" Dual Scan Display
- PC Card Slot(s) (Two Type II or one Type III)
- Pre-installed choice of Windows® 95 or Windows for Workgroups*

intel inside pentium® PROCESSOR

Designed for Microsoft® Windows®95

DURACELL® RECHARGEABLE BATTERY INCLUDED

Microsoft Internet Explorer

Now you can fly through your work and keep your spending down to earth. The new TI Extensa™ 510 offers a powerful, yet practical, 100MHz Pentium processor plus full PCI bus architecture for maximized performance. Also standard are its special Windows keyboard, 810MB hard drive, light weight (under 6 pounds), and award-winning TI service and support. Like they say, it's your money. To get more machine for it, call **1-800-TI-TEXAS** today. And start doing extraordinary things.

START™ DOING EXTRAORDINARY THINGS

Internet: http://www.ti.com E-mail: 2ti@msg.ti.com

TEXAS INSTRUMENTS

*Only one operating system will be allowed on the Extensa notebooks. When you choose Windows 95 or Windows for Workgroups, the other will automatically be deleted. Extensa and "Start Doing Extraordinary Things" are trademarks of Texas Instruments. Pentium and the Intel Inside logo are registered trademarks of Intel Corp. Microsoft, Windows, and the Windows logo are registered trademarks of Microsoft Corp. © 1996 TI.

Circle 242 on reader service card

an electronic document systems association in Torrance, California, agrees. "We've used other browsers, and Netscape's works the best," he says.

Navigator fits the definition of a World Class Award winner: a terrific product released at exactly the right time. But many of the other winners weren't so easy to pick. In an industry gone topsy-turvy, the big marketing machines work overtime, regardless of whether the products they promote merit the hype. This marketing monster may fool some of the people some of the time, but this year, at least, our experts ignored the shrill sales pitches and made some sharp calls. When you head out in search of the high-tech tools you need, keep the advice of our experts at hand. Maybe you can avoid being taken as a rube by the fast-talking hypesters of the digital age.

Eric Knorr is a contributing editor for PC World *and the editor and principal author of* The PC Bible *(Peachpit Press, 1995, 800/283-9444).* PC World *contributing editor Stephen Manes is a columnist for the* New York Times *and coauthor of* Gates: How Microsoft's Mogul Reinvented an Industry *(Touchstone/Simon & Schuster, 1994, 800/223-2348).*

WHERE TO BUY

Adobe Acrobat 2.1
Adobe PageMaker 6.01
Adobe Photoshop 3.05
Adobe Systems Inc.; 800/833-6687
Reader service no. 707

America Online
800/827-6364
Reader service no. 708

Apple Newton
Apple Computer Inc.; 800/538-9696
Reader service no. 709

Autodesk 3D Studio 4.0
AutoCAD R13
Autodesk, Inc.; 800/879-4233
Reader service no. 710

Caere OmniPage Pro 6.0
Caere Corp.; 800/535-7226
Reader service no. 711

Collabra Share 2.2
Netscape Communications Corp.; 800/474-7427
Reader service no. 712

CorelDraw 6.0
Corel Corp.; 800/772-6735
Reader service no. 713

Creative Labs Discovery Multimedia Upgrade Kit
Sound Blaster 16
Creative Labs, Inc.; 800/998-5227
Reader service no. 714

Diamond Stealth64 Video 3200
Diamond Multimedia Systems, Inc.; 800/468-5846
Reader service no. 716

Epson Stylus Pro/Pro XL
Epson America, Inc.; 800/374-7300

Gateway 2000 Family PC line
Gateway 2000 Professional line
Gateway 2000, Inc.; 800/846-2000
Reader service no. 717

Hayes Optima 288 V.34+Fax With EZJack
Hayes Microcomputer Products, Inc.; 800/964-2937
Reader service no. 718

HP Colorado Backup
HP Colorado T1000e
HP Color LaserJet 5
HP DeskJet 855C
HP LaserJet 5/5M
HP LaserJet 5M Plus
HP NetServer line
HP OfficeJet Model 350
HP OmniGo 100 Organizer Plus
HP ScanJet 4c
HP SureStore CD-Writer 4020i
Hewlett-Packard; 800/752-0900
Reader service no. 719

IBM PC Server line
IBM ThinkPad 701C
IBM ThinkPad 755CD
IBM Corp.; 800/426-3333

Intel Pentium Processor 166
Intel Pentium Pro Processor
Intel ProShare Video Conferencing System 200
Intel Corp.; 800/538-3373
Reader service no. 720

Intuit QuickBooks 4.0
Quicken 5 for Windows 95
TurboTax
Intuit, Inc.; 800/624-8742

Iomega Zip drive
Iomega Corp.; 800/697-8833
Reader service no. 721

Logitech MouseMan '96
Logitech, Inc.; 800/231-7717
Reader service no. 722

Lotus cc:Mail for Windows
Lotus Notes release 4
Lotus Organizer 2.1
Lotus Development Corp.; 800/343-5414
Reader service no. 723

Microsoft Access for Windows 95
Microsoft Cinemania
Microsoft Encarta
Microsoft Excel 5.0
Microsoft Internet Assistant
Microsoft Natural Keyboard
Microsoft Office 95
Microsoft PowerPoint
Microsoft Project for Windows 95
Microsoft Visual Basic v. 4.0
Microsoft Windows 95
Microsoft Windows NT
Microsoft Word 6.0
Microsoft Corp.; 800/426-9400
Reader service no. 724

Myst
Where in the World Is Carmen Sandiego?
Broderbund Software, Inc.; 800/521-6263
Reader service no. 725

NEC MultiSpin 6X
NEC MultiSync XV 15+
NEC MultiSync XV 17+
NEC Technologies, Inc.; 800/632-4636
Reader service no. 726

Netcom On-Line Communications Services Inc.
800/638-2661
Reader service no. 727

Netscape Navigator 2.0
Netscape Communications Corp.; 800/638-7483
Reader service no. 728

Norton Navigator for Windows 95
Norton pcAnywhere-32
Norton Utilities for Windows 95
Symantec Act 2.0 for Windows
Symantec Corp.; 800/441-7234
Reader service no. 729

Novell NetWare 4.1
Novell, Inc.; 800/453-1267
Reader service no. 730

PC Connection
800/800-0003
Reader service no. 731

Pinnacle Micro Apex 4.6GB Optical Drive
Pinnacle Micro, Inc.; 800/553-7070
Reader service no. 732

PKZIP version 2
PKWare, Inc.; 414/354-8699
Reader service no. 733

Procomm Plus 3.0 for Windows
Datastorm Technologies, Inc.; 800/474-1547
Reader service no. 734

Sportster 28.8 Faxmodem
U.S. Robotics Corp.; 800/342-5877
Reader service no. 735

SkyCard PCMCIA Card
SkyTel Corp.; 800/456-3333
Reader service no. 736

Tektronix Phaser 340
Tektronix, Inc.; 800/835-6100
Reader service no. 737

Western Digital Caviar AC31600
Western Digital Corp.; 800/275-4932
Reader service no. 738

WinFax Pro 7.0
FormFlow 2.0
Symantec Corp./Delrina; 800/441-7234
Reader service no. 715

Yahoo
http://www.yahoo.com/

For more information about all products and services in this article, circle reader service no. 909.

SMALLER
footprint

Smarter
Paper-Handling

LOWER
OPERATING COSTS

lynamite
DUPLEXING

"Give Me One Good Reason Why I Should Switch To Kyocera Printers."

nice
price

higher
quality

Better
Service And Support

easier
network management

HALF
THE COST-PER-PAGE

Kyocera offers a broad range of FS-Series + printers:

- **600 dpi**
- **10 and 18 ppm**
- **SNMP support**
- **Cartridge-free**
- **Multiprotocol support**
- **Modular paper-handling**
- **Duplexing**
- **15-bin sorter with mailbox option**
- **Energy Star compliant**
- **Compact design**

Introducing the new line of FS Series + printers from Kyocera®. They're easier to manage, more advanced and more reliable than ever. That's why so many people are switching to Kyocera page printers.

Call 1-800-232-6797, Dept. 1016 To Apply For A Free 30-Day Trial.* Or Visit Us At http://www.kyocera.com

Call today and find out why Kyocera is the new force in network and workgroup printers.

KYOCERA

Designed for Microsoft Windows 95

ECOSYS

©1996 Kyocera Electronics, Inc. Kyocera is a registered trademark of Kyocera Corporation. Energy Star does not represent EPA endorsements of any product or service. All other product or service names mentioned herein may be trademarks or registered trademarks of their respective owners. *Free to qualified respondents.

Circle 127 on reader service card

THIS IS YOUR COMPANY.

YOU NEED TO FIND A MESSAGE THAT'S IN ONE GUY'S POCKET.

YOU HAVE HALF A SECOND.

TEST DRIVE THE FASTEST SEARCH ENGINE ON THE HIGHWAY.
HTTP://WWW.ALTAVISTA.DIGITAL.COM

AltaVista™ is the fastest, hungriest search engine on the Internet, the first that can index every word of every available Web page (15 billion words, 30 million pages so far), delivering results almost instantly, even listing the most relevant sites first. Since it surely takes you longer to search through less stuff in your company's data, you're probably asking, "When can we have an AltaVista around here?" And the answer is, "Right now." AltaVista is a Digital invention, and its technology is ideal for corporate intranets. So we're making it available to your business, to give your people unparalleled access to information, to make your company's network as responsive and easy-to-use as the Internet at its best. To learn more, first try AltaVista at the address above, then visit our software Web site at http://www.altavista.software.digital.com or call 1-800-336-7890.

NOW YOU KNOW WHY WE INVENTED ALTAVISTA SEARCH.

Circle 83 on reader service card

©1996 Digital Equipment Corporation. Digital, the DIGITAL logo and AltaVista are trademarks and Whatever It Takes is a service mark of Digital Equipment Corporation. Beta of AltaVista Search is currently available from Digital Equipment Corporation.

VIOLENT ASSAULT AT COMPU
CLAIMS ELEVEN, LEAVES ONE

SYSTEM PICTURED IS THE DELL LATITUDE XPi P120ST.

TER MAGAZINE UNHARMED.

DELL LATITUDE. TORTURE TEST WINNER TWO YEARS IN A ROW.

PC Computing took twelve leading notebook computers (including our own Dell Latitude P120ST) and viciously assaulted them. They froze them at 0°F. They baked them at 120°F. They dropped them on their chassis from 29 inches. Then they opened and exposed their screens, and dropped them again. This time on a sharp angle. Finally, they poured an ounce of coffee, sugar and cream directly into their keyboards. Only our Latitude survived without any damage. Having won *PC Computing*'s Torture Test two years running, we're sure that Dell Latitude notebooks can stand up to your worst days, too.

DELL® LATITUDE® XPi P133ST
133MHz PENTIUM® PROCESSOR

- NEW Network-ready Notebook
- 11.3" SVGA Active Matrix Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 pounds
- Extendable 1 Year Warranty†

★ *Upgrade to a 1.2GB hard drive, add $400.*
★ *Upgrade to 16MB RAM, add $299.*

$3899

Business Lease◊: $140/Mo.
Order Code #800047

DELL LATITUDE XPi P100SD
100MHz PENTIUM PROCESSOR

- NEW Network-ready Notebook
- 10.4" SVGA Dual Scan Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 pounds
- Extendable 1 Year Warranty

★ *Dell Latitude DeskDock™ Station with Advanced Port Replicator, add $229.*

$2699

Business Lease: $100/Mo.
Order Code #800053

DELL LATITUDE LM P133ST
133MHz PENTIUM PROCESSOR

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 16MB RAM/810MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery
- Touchpad/IrDA-1 Port
- Under 7 pounds*
- Extendable 1 Year Warranty

★ *Upgrade to 24MB of RAM, add $400.*

System Not Pictured

$3999

Business Lease: $144/Mo.
Order Code #800052

DELL LATITUDE LM P133ST
133MHz PENTIUM PROCESSOR

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery
- Touchpad/IrDA-1 Port
- Under 7 pounds
- Extendable 1 Year Warranty

★ *Upgrade to 16MB of RAM, add $299.*
★ *2nd Lithium Ion battery, add $249.*

System Not Pictured

$3499

Business Lease: $129/Mo.
Order Code #800051

DELL LATITUDE LM P100SD
100MHz PENTIUM PROCESSOR

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 16MB RAM/810MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery
- Touchpad/IrDA-1 Port
- Under 7 pounds
- Extendable 1 Year Warranty

★ *28.8 XJACK®/Cabled Modem, add $259.*
★ *Upgrade to a 1.3GB hard drive, add $200.*

System Not Pictured

$3299

Business Lease: $122/Mo.
Order Code #800050

DELL LATITUDE LM P100SD
100MHz PENTIUM PROCESSOR

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery
- Touchpad/IrDA-1 Port
- Under 7 pounds
- Extendable 1 Year Warranty

★ *Upgrade to 24MB of RAM, add $699.*
★ *Upgrade to an 810MB hard drive, add $200.*

System Not Pictured

$2799

Business Lease: $104/Mo.
Order Code #800049

TO ORDER

800-825-8811

http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03149

Dell's featured computer artist is Jonathan Herbert of NY, NY.

Pricing is not discountable. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W Braker Lane, Suite D, Austin, TX 78758. *System weight with floppy drive in options bay. ◊Business leasing arranged by Leasing Group, Inc. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. XJACK is a registered trademark of US Robotics Mobile Communications Corporation. ©1996 Dell Computer Corporation. All rights reserved.

MORE PROFIT! MORE SALES! MORE CUSTOMERS!

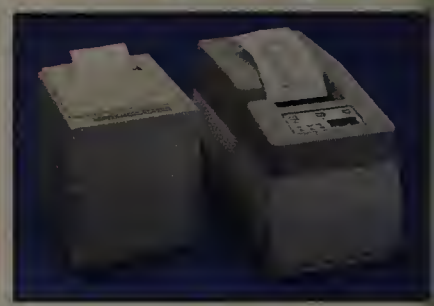
Save Time, Reduce Theft, Speed Checkout with

The General Store Retail Management System

Since 1983, **The General Store** has been the system of choice by thousands of retail and chain stores nationwide. Known for its ease of use, flexibility, and lightning speed, **The General Store** is ideal for most retail environments. At $395, **The General Store** starter kit offers over 250 of the most desired point of sale features. A clerk can learn to use it in minutes. Your customers are processed in seconds.

THE GENERAL STORE — SOFTWARE

PC AMERICA
HARDWARE SOLUTIONS



Flexible Enough for Any Business

apparel/clothing/shoe
appliance
art gallery
automotive/tire
beauty salon/supply
bicycle/motorcycle
book
bridal and tuxedo
card shop/gift shop
computer
convenience/fast food
dry cleaner
eyeglass
florist
furniture
gas station
sporting goods/golf/gun
grocery/bakery
hardware/locksmith
health/fitness center
janitorial supply
lawn and garden
jewelry
liquor
mail order
marine supply
music/record and tape
nail salon
office supply/stationery
pet
pharmacy
photography
plumbing & heating
specialty stores
toy /hobby
sports cards/uniform
...and YOUR STORE!

Increase your profits by more than 25%

Computerization pays for itself, saving you thousands of dollars, giving you peace of mind, and making the best use of your time. The General Store, with over 250 of the most desired point of sale features, will help you leapfrog past your competition by controlling costs, reducing errors and increasing efficiency.

- ☑ **Quicker Checkout**-barcode scanning (50% faster than a cash register), instantaneous no wait receipt printing system, automatic credit card verification, split tender, product lookup by any word, new items added at POS
- ☑ **Increased Accuracy**-100% accurate built-in barcode scanning and printing, instant price lookup, price quotes, serial number tracking, multiple pricing levels, multi-unit pricing (i.e. 3/$1.00)
- ☑ **Reduced Theft**-cash register reconciliation, salesperson tracking, password protection, pole display sale verification, accurate inventory tracking
- ☑ **Cost Reductions**-real time inventory control, dynamic update of item sales and inventory data, reorder point alarms, extensive reporting capabilities, multi vendor P.O. selection (5 vendors per item)
- ☑ **Better Business Decisions**-detailed reports and financial statements showing the status of your business, charge account credit limit checking, parts explosion for kits tracks every inventory item, built-in general ledger, accounts receivable and accounts payable
- ☑ **Better Customer Service**-customer purchase history, complete layaway, mail list management, instant customer lookup, multiple price level support by category of customer
- ☑ **Unique Features**-powerful size/ color matrix for clothing and shoe stores, electronic scale compatibility, convenience store/gas station pump compatible, supports 99 work stations per store, multi-store ready, FREE file conversions from 32 other POS systems

FREE!
Take a FREE 30-day General Store Test Drive
(call now for details)

PC AMERICA PRICE LIST

Using another P.O.S. system? Call for **SPECIAL COMPETITIVE UPGRADE PRICE!!!!**

DEALERS WANTED!
Join our new dealer program. It's **FREE.** It's the fastest way to make money...**AND** we make it **EASY.** Call now for details.

The General Store Professional Edition (single user, multisite ready)	$1,295.00
The General Store Network Edition (multisite ready)	$1,995.00
The General Store Starter Kit (abridged version)	$395.00
Cash Drawer	~~$199.00~~*
Star/Citizen Receipt Printers	~~$299.95~~*
Pole Display	~~$299.00~~*
CCD Bar Code Reader	~~$399.00~~*
Laser Bar Code Scanner	~~$429.00~~*

* Call for Competitive Prices

1-800-PC-AMERICA

Call Toll Free 1-800-722-6374

Phone: 914-267-3500

Circle 195 on reader service card

PC America
60 N. Harrison Ave.
Congers, NY 10920

Fax: 914-267-3550

THE NO-NONSENSE GUIDE TO INTERNET PROVIDERS

Don't be fooled by all the hype. Here's how to choose an Internet service provider you can count on.

By Yael Li-Ron

Ever traveled around the world in 80 seconds? You will, as soon as you get Internet access. Then again, maybe you're already on the Net at work and want an account for home. Either way, you're sure to run into many confusing choices. Should you sign up with a large Internet service provider like Netcom or AT&T's WorldNet, or stick with an online service like America Online or CompuServe? Will a small provider in your hometown serve your needs? What about ISDN versus modem connection? You can study the subject and do your homework, but the longer you research the subject, the more confused you'll get (we know, we've been there). So forget trying to figure it all out. We've done the legwork for you, and we've come up with a few surefire recommendations.

ROBERT NEUBECKER

We evaluated the services of hundreds of providers, large and small, and established some baselines for services, pricing, and availability. We also signed up with some of the top national providers and tested their service. Somewhere along the T1 lines and SLIP connections, we came up with a few guidelines on where to look, what to look for, what questions to ask, how to survive the jargon, and how to avoid road hazards.

Let's start with the basics. What do you need to connect to the Internet? A computer, a modem, and a phone line. We assume you already have these. What you're missing is an account with an Internet service provider, a company that provides access to the Internet.

If you're going online strictly to meet people, you should get your Internet access the old-fashioned way—through a commercial online service such as America Online, CompuServe, Prodigy, or Wow. The rich chat facilities, e-mail features, and forums these services provide are years ahead of what you can find on the Net. And as frosting on the cake, the online services all offer standard Internet access and tools. The downside: You pay significantly more for the value-added content than you would for "pure" Internet access (see "When Your ISP Is an Online Service").

Things to Ask an ISP Before Signing Up

- **Do you offer a flat rate (all-you-can-eat Internet)?**
- **How is technical support offered? By phone? E-mail? A list of frequently asked questions (FAQs)?**
- **Do you support ISDN? (After all, I may want to upgrade in the future.)**
- **Is a Web page included with the account?**
- **Do you have a piggyback option for other household members?**
- **Do you have a local access number?**
- **What kind of setup help (documentation, customer service, and so on) do you offer?**
- **Do you offer a proprietary browser or can I use any browser I like?**
- **Can I apply for a virtual domain through your service?**
- **Do you provide training for Internet novices?**

The National Providers: Too Big for Their Britches?

Throughout this article we refer to small and large ISPs, but those are pretty sweeping generalizations. Among small ISPs, some have a few hundred customers and others serve thousands; some are owned by individuals, others by groups of investors. The real difference is between *local* (sometimes called *regional*) and *national* providers. National ISPs have local access numbers in several states. Local providers have just a few, and in a limited area.

What's the allure of national ISPs? They offer local access numbers throughout North America, making them ideal for business travelers. They're owned and operated by corporations, carrying the promise of financial stability. But at what cost?

We asked several volunteers to sign up with national ISPs and report their findings. The satisfaction rate varied from provider to provider and from one part of each ISP to the next. But one complaint was consistent: Customer service leaves a lot to be desired. A SpryNet customer who wished to cancel his subscription had to dial a number in the 206 area code (there was no toll-free number, of course), then stayed on hold for 45 minutes. As for tech support, the consensus was that ISPs are growing too fast, and they seem to hire underqualified support staff. One tester reported the following conversation with a PSINet representative:

"Doesn't your browser support HTML tables?"

"H...?"

"...TML, you know?"

"Uh, dunno. Let me ask my supervisor."

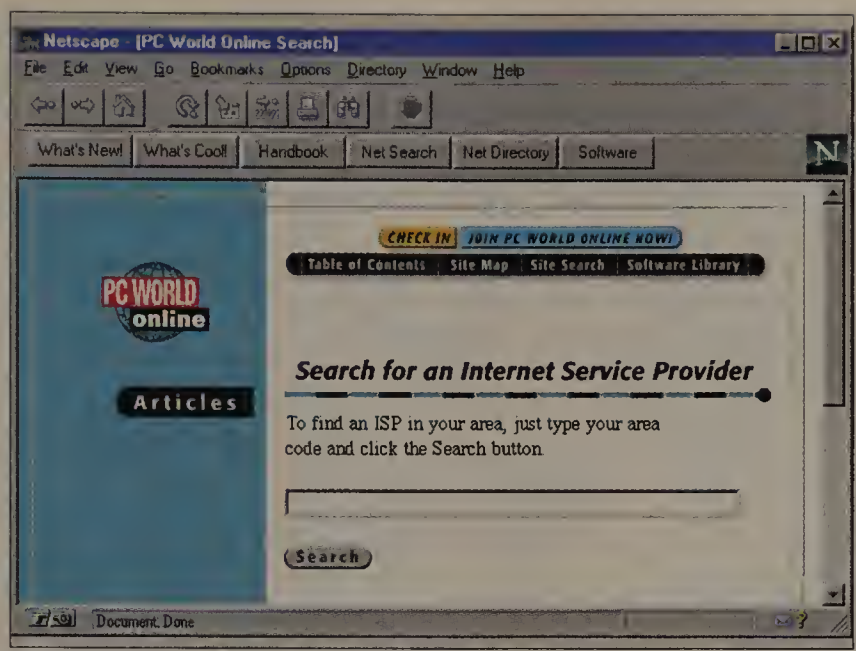
A tester who signed up with Concentric was put on hold for 45 minutes. It might have been even longer, but he chose not to stay connected to find out.

Another frustrating issue was the cryptic software. SpryNet's setup program didn't recognize the modem or the communications port, and the tester had to enter that information manually. Netcom's browser, Netcruiser, didn't offer security features, and our tester couldn't find any information on using Netscape Navigator instead. PSINet's Web browser displayed a seemingly corrupted file and promptly crashed.

The bottom line: Having survived a rocky start, our testers seem to like their services and intend to keep them—all but the two former Concentric customers and one SpryNet tester who's just too comfortable with America Online to change.

PERSONAL WEB PAGES don't get much better than this. SpryNet's Home Page Wizard is a unique tool in a world where users are usually left to figure out HTML on their own.

But we're assuming you want pure Internet service without the baggage. You want to browse the World Wide Web, participate in newsgroups, and send and receive e-mail without going broke in the process. So where do you start? Right here. Follow our ten steps to finding the perfect service provider for your needs, and you'll be up and surfing in no time.



FIND AN ISP ONLINE: Use PC World's ISP Finder (http://www.pcworld.com/july96/isp.html) to find providers in your area.

WHERE THE ISPS ARE. The Pacific Bell Yellow Pages ad campaign claims, "If it's not in here, maybe it doesn't exist." So turn to *I* for *Internet*, find a service provider in your area, and you're set. That was pretty easy, don't you think? Only there's no such entry in the Yellow Pages. And a search under Communications yields nothing. Ditto under Computers.

There are thousands of Internet service providers in the United States; you just have to know where to look. Start with the table below; even better, if you already have Internet access, go to the ISP Finder area on the PC World Online Web page (http://www.pcworld.com/july96/isp.html) and type your area code in the Search box. Or send e-mail to isp-###@pcworld.com, substituting your area code for the ###. (For example, isp-803@pcworld.com return a listing of providers in the 803 area code.) Or post a message on the newsgroup alt.internet.services asking for recommendations for service providers in your area. For a less high-tech solution, check the ads in any

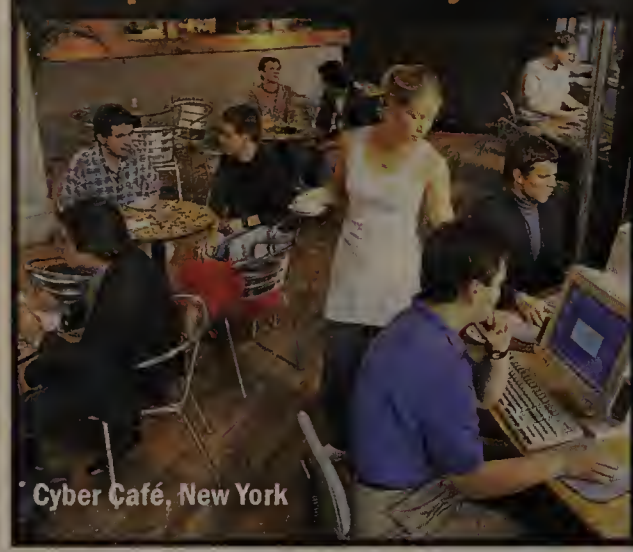
National Providers: Find the One That Best Serves Your Needs

● = Yes ○ = No

	Flat rate	Virtual domain	Personal pages/space	Proprietary software	Extras	Reader service number
Concentric 800/745-2747 http://www.cris.com/	$29.95	○[1]	●/5MB	○	First month $1. Services for online gamers. Free access to BBSs. Netscape Navigator included.	631
EarthLink 800/395-8425 http://www.earthlink.net/	$19.95	●	●/2MB	Total Access	620 local servers, many more than its competitors. Free telephone and online support; 1 free month when you refer a friend. Lets you play the CD-ROM game Spycraft.	632
GNN 800/819-6112 http://gnn.com/gnn/GNNhome.html	○	●	●/20MB	GNNworks GNNmessenger GNNpress	20 free hours when you sign on a friend. Netscape Navigator included (summer 1996).	633
Microsoft Network 800/426-9400 http://www.msn.com/	○	○	○	○	Most of its rich proprietary content available to nonmembers, but some areas restricted to members only.	634
Netcom 800/353-6600 http://www.netcom.com/	$19.95	○	●/1MB	NetCruiser	First month $5. Unlimited weekend access. Free 24-hour technical support.	635
PSINet 800/827-7482 http://www.usa.pipeline.com/	$19.95		●/500K	Pipeline	First 14 days free.	636
SpryNet 206/957-8997 http://www.sprynet.com/	$19.95	○	●/5MB	SpryNet	15 hours daily phone support; 24-hour support via chat room. Internet Explorer Included (summer 1996).	637
WorldNet 800/967-5363 http://www.att.com/worldnet/wis/	$19.95	○	○	○	5 free hours per month until March 1997 for residential AT&T customers, or $19.95 flat rate. Parental lock.	638

[1] Will be available this summer.

Sample Java at a Cybercafé


Cyber Café, New York

Muddy Waters, San Francisco

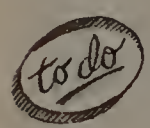
WHAT'S HIPPER THAN AN ESPRESSO BAR? An espresso bar with Internet access. Cyber Café on New York's Lafayette Street has PCs for Web browsing. Muddy Waters on San Francisco's Church Street is part of SFNet, a network of cafés that offer limited Internet access via coin-operated terminals.

local newspaper or computer tabloid.

Once you have a list of companies that provide Internet access in your area, you can determine which one is best for you by process of elimination. Read on.

ASK FOR A DIAL-UP ACCOUNT.

Before you sign up, you need to know what you want. Any ISP you call is likely to ask you a series of questions that will sound like mumbo jumbo: Do you want a SLIP/PPP account? A shell account? (See "Understanding Online Jargon" for more information.) Don't sweat the terminology. Unless you have a business that can afford an expensive, ultra-fast 56-kbps "leased line" or a T1 line, you'll want a *dial-up account*—an Internet account that lets you use your modem to make a connection. So start by asking the providers for a dial-up account; the ISPs may refer to it as a SLIP/PPP account, but that's *their* business.



GET A FLAT RATE.

Next you need to think about money. In preparing this article, we polled hundreds of ISPs about their services, availability, and pricing. In response to our question about prices, the most common reply was something like "Are you kidding me?" Some providers have fee schedules so complex they require a degree in accounting to sort out. Let's see: $20 a month for the first 15 hours, then $1.50 for each additional hour, and $5 if you exceed 100 e-mail messages, plus $5 for a Web page; storage space for your graphics is extra. Forget it. Just say no to this sort of scheme. Our advice: If an ISP doesn't offer a flat rate, look elsewhere. A flat rate should be between $20 and $30 a month, and it should include all-you-can-eat Internet: a dial-up account, e-mail, and space for a Web page. Some providers limit their fixed-rate usage to 75 to 200 hours, which is quite reasonable. Do the math: More than 2 hours a day—that's almost as good as unlimited use.

As for the start-up fee, some ISPs think they're the only game in town and charge $50 or more for the privilege of setting up an account with them. At the risk of alienating hundred of ISPs, let us say this right now: There's no justification for this tactic. Look for a provider that offers free hookup *and* a free trial period. Remember, you're the one making the financial commitment, not the provider.

Some service providers try to lure you with offers you can't refuse. AT&T's WorldNet, for instance, provides 5 free hours to all residential AT&T customers, which sounds hard to pass up. But after the first 5 hours the meter will be ticking to a beat of $2.50 per hour. That hurts. And trust us, you'll run out of your allotted time after one week. Luckily, WorldNet also offers a flat rate of $19.95.

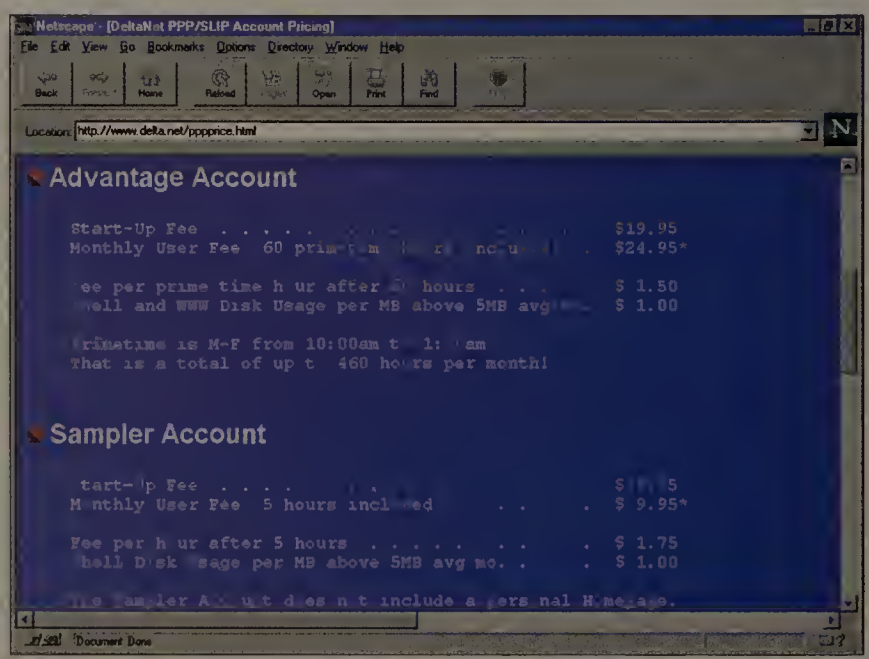
Other household members want to get on the Net? You might not need separate accounts. Some ISPs will let you "piggyback" a second or third person (with their own unique e-mail handles) on your account for a nominal fee.

AVOID TOLL CALLS.

Toll calls are the hidden cost of Internet connections. Even with a flat rate, you can end up with phone bills of hundreds of dollars a month if you're not careful. Look for an ISP that has a local access number.

The larger national providers cover most metropolitan areas but tend to neglect small, rural communities. Craig Sauvigne of Rock Hill, South Carolina, wanted an Internet account for research and leisure, but the closest access numbers for America Online, CompuServe, and Netcom were in Charlotte, North Carolina. Sauvigne and the rest of Rock Hill aren't cut out of the Internet loop, though: Local provider CetLink (http://www.cetlink.net) is servicing that small college town with local access numbers, multiple users per account, and a flat rate to boot.

And what about 800 numbers? Many ISPs advertise this



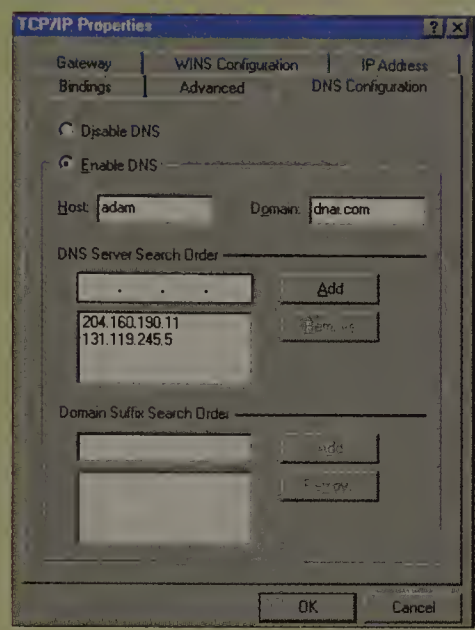
LIFE'S TOO SHORT. IF YOU NEED AN ACCOUNTANT TO DECIPHER the ISP's convoluted pricing scheme, go elsewhere.

LEFT, JOHN ABBOTT; RIGHT, JAY BLAKESBERG

Understanding Online Jargon

If you want to learn the language of the natives, start with the alphabet soup—you know, those mysterious acronyms and technical terms that ISPs insist on using instead of plain English.

The mechanism that controls your Internet connection is called a *protocol*. To make a successful connection to the Internet, your computer needs TCP/IP, which is the standard Internet protocol. TCP/IP is integrated into Win 95, but Windows 3.*x* users need to install this software on their systems. If you've got a dial-up connection (that is, you're using a phone line), you also need a dial-up protocol; ISPs will provide you with the software and protocol. The two common Internet dial-up protocols are *SLIP* and *PPP*. SLIP, which stands for Serial Line Internet Protocol, is gradually being replaced by PPP, Point-to-Point Protocol. For one thing, SLIP doesn't support ISDN.



SLIP? TCP/IP? Huh? Windows 95 understands the technobabble. Tell your provider that you're running Windows 95, and ask for directions for configuring your system, as shown here.

So if you see a provider advertise its SLIP/PPP accounts, it's not an either-or proposition. If you're looking for a dial-up account for personal or small-business use, your only choice is PPP. It's as simple as that. But really, you shouldn't have to even think about protocols, just as the water company doesn't ask its customers which pumps to use.

Some ISPs offer *shell accounts*, which do not have SLIP/PPP. A shell account lets you access the ISP's server directly, so you can interact with it in a deliciously cryptic "character mode." Okay, some people may enjoy typing commands such as *awk* or *grep* (gesundheit!), but most mortals should be spared this dubious pleasure. So why would anybody want a shell account? If your provider has only a local access number and you're on the road often, you can use telnet software to access your account from a remote system, check e-mail, update your World Wide Web page, and so on. (Telnet is a UNIX utility for remote access.)

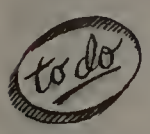
Windows 95 comes with built-in support for PPP, leaving you with one less step to worry about when you install your Internet access software. You can also use the Inbox for Internet e-mail. Let your service provider know that you're using Windows 95, and ask for specific installation instructions.

And, lest we forget, POP stands for Point of Presence, which is a fancy way of referring to the server's location. If you hear that Mayberry has a local POP, that means there's a local access number.

Do we really need to know all these terms? Marketing-savvy ISPs know the answer to that one. They advertise their wares as dial-up accounts. But they may ask you confusing questions when you call to order service, so it's good to be prepared.

How do you get on the Internet when you're on the road? If you have a shell account, you can go to a cybercafé (see "Sample Java at a Cybercafé") or a public library that offers Internet access, and use telnet from those sites. Note that some ISPs don't offer shell accounts at all, and others offer a shell-only option.

toll-free access, which sounds like the perfect solution for the frequent flier until you discover that they charge extra for this service. At $10 per hour for 800 number access, you might as well make that long-distance call to the closest local access number.



GET A FAST CONNECTION.

The next item on your shopping list is the connection type. The cheapest and most practical way to go is a 28.8-kbps modem. (If you still have a 14.4-kbps modem, it's time for an upgrade.) The fastest route available to home PC users and small-business owners is ISDN—a digital phone line potentially four times faster than a 28.8-kbps modem. Most telephone companies are offering ISDN services, but setup and configuration still cause many headaches. Expect to pay more, too. In addition to the initial investment in an ISDN terminal adapter (sometimes referred to as a "digital modem"), service providers charge more for this type of connection. Your phone company may also charge a hefty tariff both for installing ISDN and as a monthly maintenance fee. But as the adage goes, time is money, and a faster connection will free you to, well, waste more time visiting weird and wonderfully pointless sites.

Though ISDN is an attractive technology, we don't recommend that you go all out yet. If this is your first venture into ISP-land, get a standard modem dial-up account, work out the kinks, get used to it, and later consider upgrading to ISDN. You don't want to go through two potentially traumatizing experiences at the same time.

INQUIRE ABOUT PERSONAL PAGES.

Do you have a hankering to create your own Web page? After all, everyone else seems to have one nowadays. Then make sure your ISP offers some form of personal page service, whether for additional fees or as part of the account—preferably the latter. If you plan on including graphics and multimedia elements on your site, look for a provider that will give you some server space (5MB seems to be the norm) at no extra cost.

SECURE A VIRTUAL DOMAIN.

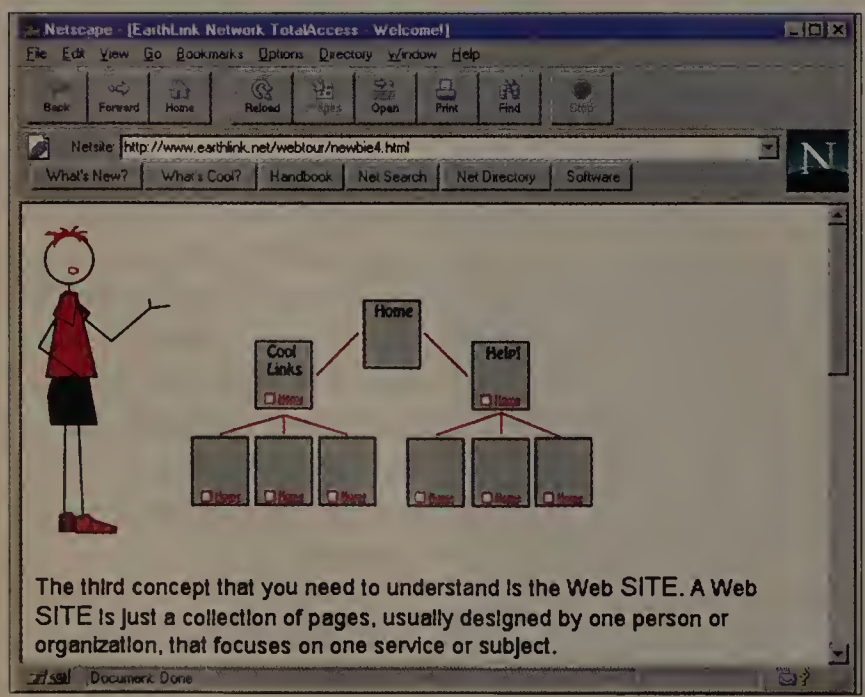
Most providers will give you an e-mail address that looks something like yourname@the_isp's_name.com. If you're a small-business owner, you may

want to replace the domain name (the part after the @ sign) with the name of your own business or organization, which has two significant advantages: It gives your business the appearance of a larger organization, and it's yours to keep for as long as the Internet is around. Even when you change ISPs, your domain stays with you. Ask your provider if you can apply for a "virtual domain." The ISP will apply on your behalf with InterNIC, a centralized office that governs the domain names on the Internet. The InterNIC application fee should cost no more than $100. (Some ISPs don't add a surcharge to InterNIC's fee.) In many states you pay as much for a custom license plate, so this isn't such an extravagance. Note that you'll need to pay a $50 annual maintenance fee to InterNIC for as long as you hold on to that domain name.

GET THE BEST SOFTWARE.

Your service provider should outfit you with all the software you need to get and work online. In addition to the driver/protocol software (Winsock, TCP/IP), you need the following tools, at the very least:

Web browser. If the ISP offers a proprietary browser, find out if your account will support third-party offerings. Don't settle for less than industry standards Netscape Navigator and Microsoft Internet Explorer. (Note: IDG, *PC World*'s parent company, owns stock in Netscape Communications.)

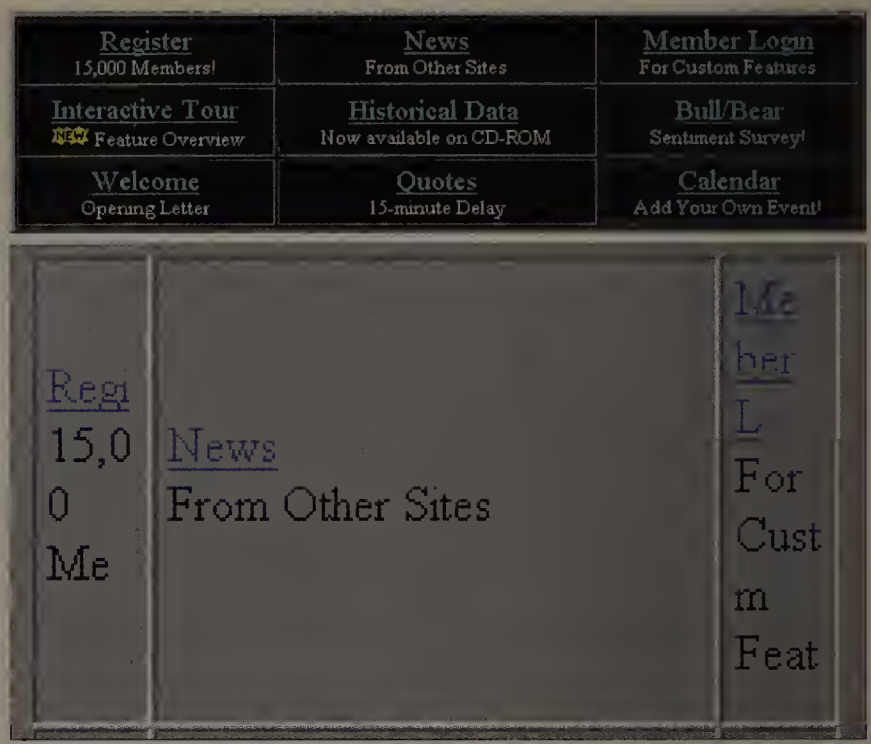


WANT TO LEARN ALL ABOUT THE WEB? Some ISPs go all out to teach you what you need to know. EarthLink may be talking down to most people, but if you're a total novice, there's no such thing as too simple.

Don't sign up with any ISP that doesn't let you mix and match software at will. If you're forced to use the provider's own tools, get another ISP.

Mail client. In computerspeak, a *client* is an application that communicates with a corresponding program on the *server* side. Your e-mail resides on the ISP's server, and you read and write it with a client. The most popular one is Eudora. If you don't like the mail client your provider gives you, take our advice and download Eudora Lite from PC World Online's site and see if you like it better. It's free. If you're using Windows 95, you can configure Exchange to handle your mail.

No matter how reputable your provider is, your e-mail may be read by less-than-scrupulous employees. Even if you erase your incoming mail immediately upon receipt (which is an option you can set in Eudora Lite), it may have already been backed up to tape as part of a regularly scheduled server backup, and anybody can read it if they put their criminal mind to it. To secure your e-mail, you might want to consider using the modestly named Pretty Good Privacy, an e-mail encryption program. You can find out more about the much-acclaimed PGP on the Massachusetts Institute of Technology's Web site (http://web.mit.edu/network/pgp.html). While you are there, you can download this powerful program, which is free for noncommercial use.



SOME ISPS INSIST ON REINVENTING THE WHEEL. On the top is an example of how Netscape Navigator views a table from The Silicon Investor (http://www.techstocks.com/) as compared to Netcom's proprietary browser, Netcruiser, on the bottom.

Newsreader. Usenet newsgroups require special software; an e-mail client won't do. Ideally, your newsreader would be an offline reader that retrieves newsgroups messages (called *articles*) and then disconnects, letting you read and reply when you're not paying for the connection, and freeing your phone line for your teenagers. Netscape Navigator

IF YOU'RE USING WINDOWS 95, configuring Exchange's Internet Mail to send and receive e-mail through your ISP is as simple as filling in the blanks in this dialog box.

When Your ISP Is an Online Service

Before you run out and sign up with an ISP, make sure you wouldn't be better off browsing the Internet via America Online, CompuServe, Prodigy, or Wow. For some people, one of these commercial online services may be the best option. Of course, you'll be using that service's proprietary interface, fiddling with a proprietary e-mail system, and paying more money per month than a standard ISP might charge. But you also get boatloads of structured content found only within the confines of that service.

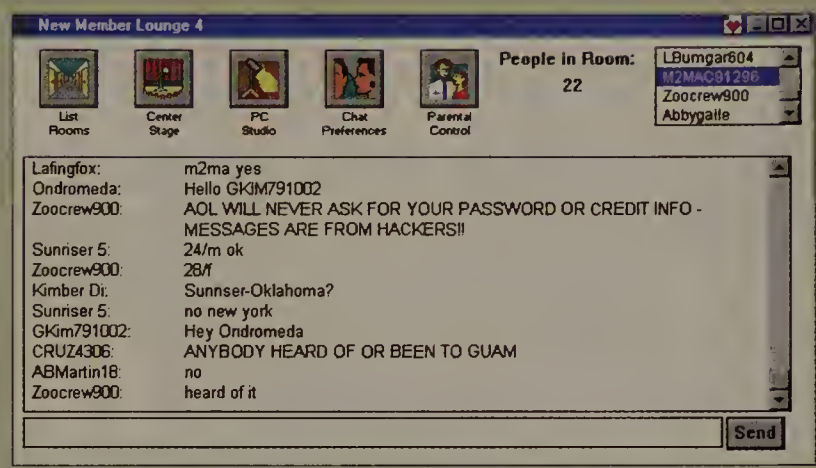
And the quality of the online services' Internet offerings, once substandard, is improving as well. AOL and CompuServe, for instance, are scheduled to bundle Netscape Navigator and Microsoft's Internet Explorer with their new releases, so surfers will be able to use the browser of their choice. All the services are embedding hypertext links to the Web within their own content. They're also providing subscribers with complete access to all parts of the Internet, from newsgroups to the Web. Best of all, the personal page tools on all four of these services are superb. They require no expertise in Hypertext Markup Language, FTP, or any cryptic UNIX process. Just select options in a wizard or fill in a form, and you've got yourself a Web page. Only a handful of ISPs we looked at offer this service.

Nor can the Internet providers beat the two cards the online services have up their virtual sleeves: chat and online shopping. If you like going online to meet other people and chat your lunch hour away, it's hard to beat AOL's chat services, with its many "rooms," instant messages, and private chat facilities. (The Net equivalent, IRC, is clunky and hard to use.) As for shopping, reports of security flaws in Netscape's browser are keeping many potential shoppers away from Internet malls, while online services—because they are closed networks—have a reputation for being secure.

Essentially, the online services are trying to provide the best of both worlds—sort of like ISPs with value-added content. Unfortunately, not one of them offers a flat-rate package, making them a lot more expensive than their sign-up fees would lead you to believe. G. S. (name withheld on request) of Portland, Oregon, was shocked to receive a $150 bill from America Online. The "free" 10 hours she got with AOL hardly covered one week's worth of online activity, which includes going online to chat and meet new people. And G. S. is not alone. A quick cruise down some message threads on the newsgroup alt.aol-sucks has revealed that her experience is quite common. (She has since switched to Netcom, thank you for asking.)

If your experience matches G. S.'s, head straight for a conventional ISP. But if you can't live without structured forums, databases, or chat and don't plan on spending lots of time cruising the Web, online services are a reasonable alternative.

Look for an in-depth review of online services in our August issue. Until then, see the table below for some suggestions.



WANT TO CHAT WITH STRANGERS about the weather in Guam? You can't beat the online services' chat facilities (shown here: an AOL chat room). If this kind of activity is your primary reason for getting wired, don't go with an ISP.

America Online
800/827-6364
Pricing: $9.95 with 5 free hours
http://www.aol.com/
Reader service no. 685

CompuServe
800/433-0389
Pricing: $9.95 with 5 free hours
http://www.compuserve.com/
Reader service no. 686

Prodigy
800/776-3449
Pricing: $9.95 with 5 free hours or $29.95 with 30 free hours
http://www.prodigy.com/
Reader service no. 687

Wow
800/943-8969
Pricing: $17.95 flat rate, first 30 days free (unlimited time)
http://www.wow.com/
Reader service no. 688

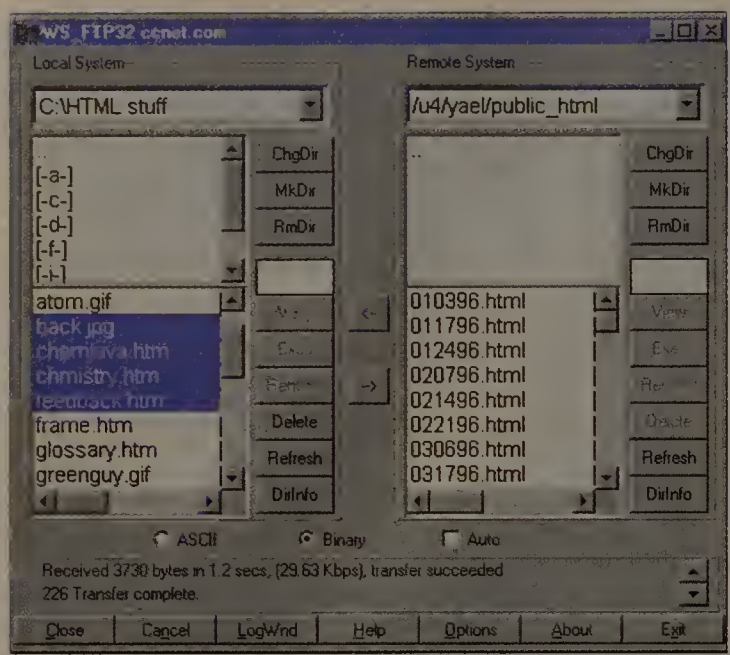
WHICH ONLINE SERVICE IS FOR YOU?

What's important to you	Your best bet
chat	AOL, Prodigy
content for children and families	AOL, Prodigy, Wow
databases	CompuServe
e-mail	AOL, CompuServe
forums	CompuServe
personal Web page	AOL, CompuServe, Prodigy

and Microsoft's Internet Explorer both offer built-in readers. They're not offline readers, but they are integrated with your software.

IRC client. Internet Relay Chat is a tool that allows you to tap out real-time conversations with other similarly equipped people. IRC is no match for AOL's chat rooms; it's clunky and cryptic, but popular with the Internet chat set. Unlike other tools listed here, it's hard to recommend an IRC client, because none of the ones we looked at were worth a thumbs-up.

FTP software. File transfer protocol is a tool for moving files between different computers on the Internet. If you plan to have a Web page, FTP is the most crucial piece of software in your possession, because it lets you *upload*, or post your files to the server.



OUR FAVORITE FTP CLIENT, SHOWN HERE, IS WS_FTP32, the Windows 95 version of ws_ftp. It lets you upload files to your Web server and do some basic file management on that site.

The best version around is Winsock FTP. If you get a different one, download ws_ftp from PC World Online's Web page.

CHECK OUT THE QUALITY OF CUSTOMER SERVICE.

You're almost home. You've identified an affordable ISP that offers a reasonable palette of software. Now for the hard part: evaluating customer service and support. Without a bit of sleuthing, you may not know how bad the service is until you're cut off in the middle of an important e-mail transmission and the best your ISP has to offer to calm your nerves is a tape loop of "The Wind Beneath My Wings."

Ask the ISP for some prequalifying information, such as the number of support persons on staff, their hours, and so on (see "Things to Ask an ISP Before Signing Up"). A few providers offer real-time interactive bulletin boards to reach their support staff, but the most common ways to get help are by phone and e-mail.

A common problem occurs when the ISP's server is down and customers think that something is wrong with their own systems. Ask the provider if there's a hot line or any other way to find out whether the server is down. Many ISPs post their announcements in newsgroups (such as alt.internet.services or different regional ones). But if you can't log on, a newsgroup won't do you any good.

Also make sure the ISP can give you sufficient help as you install the software and become familiar with the system. If all the provider has to offer is a disk, look elsewhere. You want documentation, and you want it as hard copy. If the setup and configuration instructions are online, they're not going to be of any help. The start-up kit should also include a troubleshooting guide.

Word of mouth is your best screening tool. When you consider an ISP, log on to the Web using a friend's account or from a cybercafé (see "Sample Java at a Cybercafé"), and go to that provider's site. Most ISPs list subscribers' pages on their home page, so check out these links and contact their owners to find out how they like the service.

EXERCISE YOUR OPTIONS.

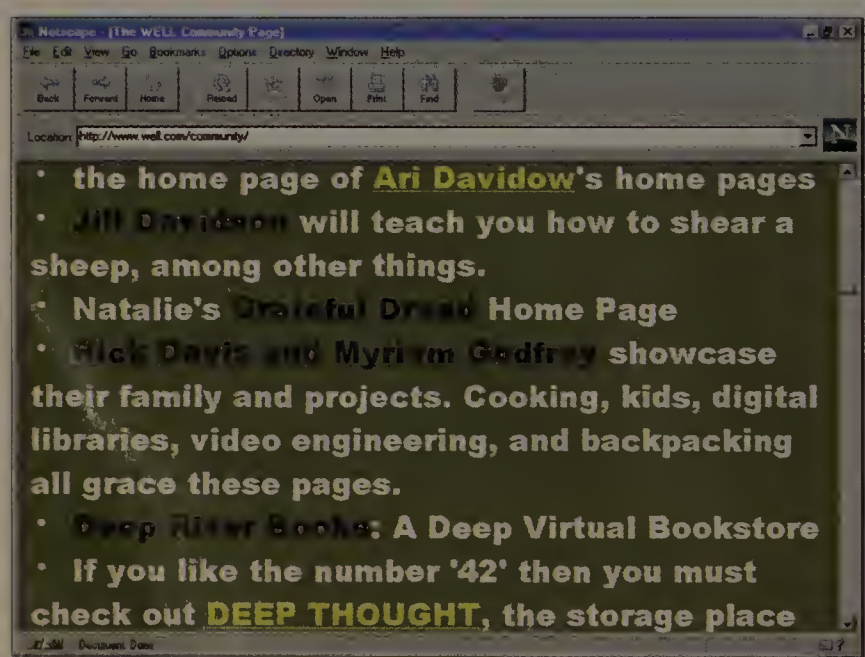
Sometimes, despite all your prescreening, you'll be unhappy with your ISP: The server is down too often, the access number is always busy, the customer support staff knows even less than you. Just bail out and go elsewhere.

Look for an ISP that offers a free trial period with an easy bail-out option. A 10-hour trial seems to be the minimum.

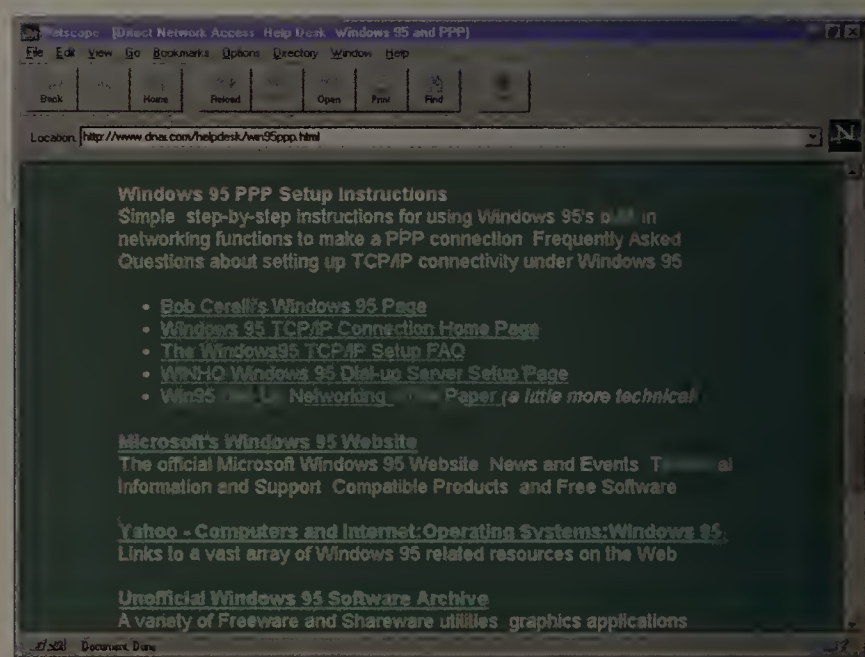
Yes, by changing ISPs you'll get a new e-mail address and will need to give it to all your friends and colleagues. But if you have a virtual domain, it will stay with you. Another option is to sign up with an e-mail forwarding service such as Pobox (http://www.pobox.com/). It costs as little as $15 per year, and the first three months are free.

The bottom line: Internet access is a very competitive market, with lots of providers fighting over little old you. Take advantage of that fact to get the best deal possible.

PC WORLD online *The files mentioned in this article are on PC World Online. Yael Li-Ron is a* PC World *senior associate editor and coauthor of* Windows 95: Making it Work for You *(ZD Press, 1995, 800/858-7674).*



PEOPLE GO ON THE WEB FOR TWO REASONS: to see and to be seen. A good ISP should offer space for a home page and give you exposure the way that The Well (http://www.well.com/community) does.



ISPS SHOULD OFFER COMPREHENSIVE ONLINE and offline support, like this example from Berkeley, California–based Direct Network Access (http://www.dnai.com/).

Tomorrow's Technology Today!

THE MICRON™

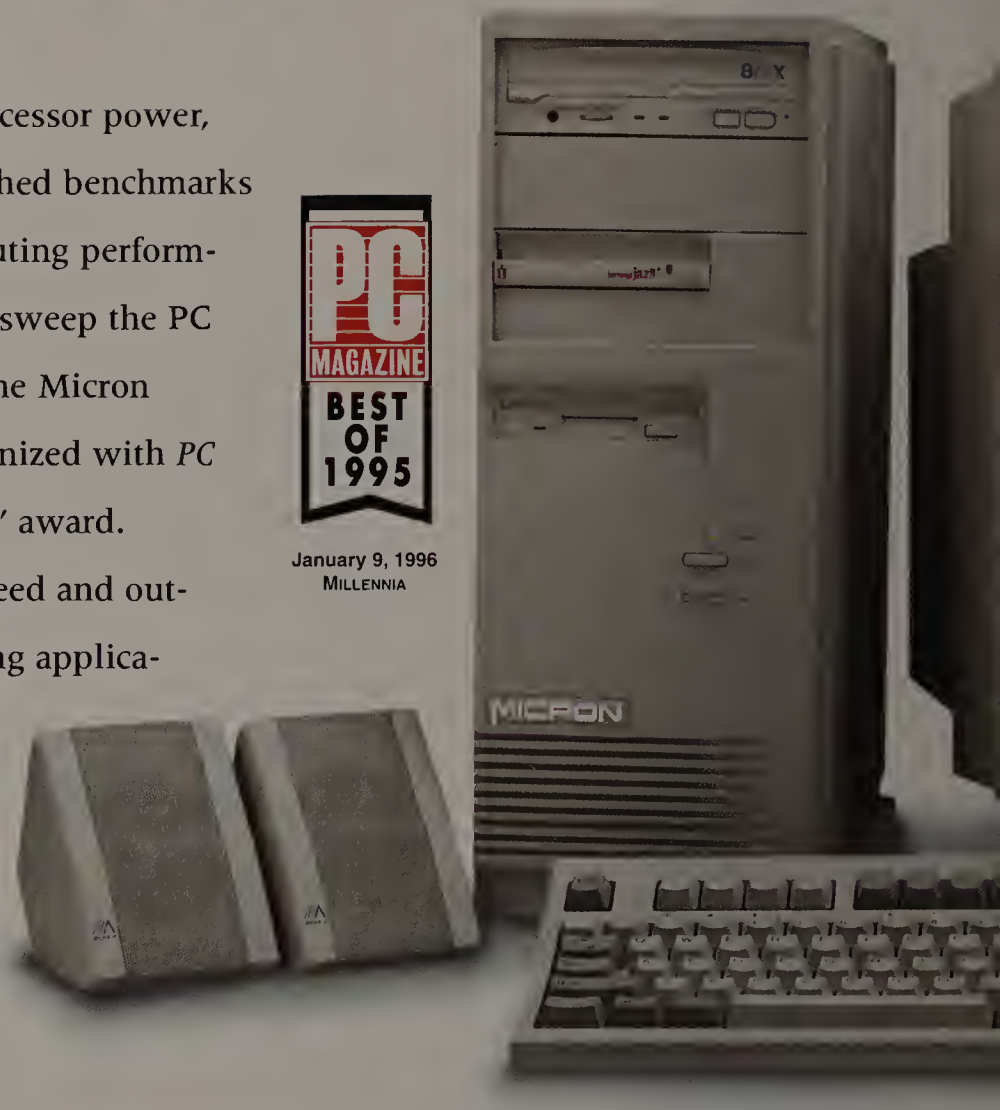
Unleashing up to 166MHz of Pentium® processor power, the Micron Millennia™ surpasses established benchmarks to create a whole new level of unbridled computing performance. Continuing to triumphantly sweep the PC industry's most coveted awards, the Micron Millennia line was recently recognized with *PC Magazine*'s "Best Products of 1995" award. The Millennia series, legendary for superior speed and outstanding value, will handle the most challenging applications—right now! So if your style is to work hard and fast, the Micron Millennia is designed just for you.

intel inside pentium PROCESSOR

PC MAGAZINE BEST OF 1995

January 9, 1996
MILLENNIA

Designed for Microsoft® Windows® 95



MILLENNIA P166

- Intel 166MHz Pentium processor
- 512KB pipelined burst cache, flash BIOS
- 8X EIDE CD-ROM drive, 3.5" floppy drive
- 16-bit stereo sound & speakers
- PCI 64-bit 3D video, MPEG, 2MB EDO
- *Tool-free* mini-tower or desktop
- Microsoft® Mouse, 104-key keyboard
- Microsoft Windows® 95 CD & MS Plus! CD
- 5-year/3-year Micron Power℠ warranty*

A • 8MB EDO RAM • 1.0GB EIDE hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
• Microsoft Works 95 CD
$1,999 Business lease $68/month

B • 16MB EDO RAM • 1.6GB EIDE hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
• Microsoft Office Pro 95 & Bookshelf 95 CDs
$2,399 Business lease $82/month

C • 32MB EDO RAM • 2.1GB EIDE hard drive
• 17" Micron 17FGx, .26dp (15.8" display)
• Microsoft Office Pro 95 & Bookshelf 95 CDs
$3,199 Business lease $109/month

- With 150MHz Pentium processor.....subtract $100
- With 133MHz Pentium processor.....subtract $200

MILLENNIA PLUS P166

- Intel 166MHz Pentium processor
- 512KB pipelined burst cache, flash BIOS
- PCI 32-bit Ultra SCSI Fast-20 controller
- 8X SCSI-2 CD-ROM drive, 3.5" floppy drive
- 16-bit stereo sound & speakers
- PCI 64-bit 3D video, MPEG, 2MB EDO
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows 95 CD & MS Plus! CD
- Microsoft Office Pro 95 & Bookshelf 95 CDs
- 5-year/3-year Micron Power warranty*

A • 16MB EDO RAM • 1.0GB Fast SCSI-2 hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$2,699 Business lease $92/month

B • 32MB EDO RAM • 2.0GB Fast SCSI-2 hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$3,499 Business lease $119/month

C • 64MB EDO RAM • 4.0GB Fast SCSI-2 hard drive
• 17" Micron 17FGx, .26dp (15.8" display)
$4,899 Business lease $167/month

- With 150MHz Pentium processor.....subtract $100

MILLENNIA™

Micron computers are winning critical acclaim for their exceptional quality, record-breaking speeds and dependable performance. Recognized regularly for technical excellence and for outstanding customer service and technical support, Micron computers have been chosen for *PC Magazine*'s "Best Products of 1995" and "Editor's Choice" five times, *PC World*'s "Best Buy" over 50 times, *PC Computing*'s 1995 MVP award and *Computer Shopper*'s "Best Buy of 1995." Micron received the highest scores in *PC Magazine*'s "1995 Service and Reliability" survey in the four categories of "Customer Satisfaction with Reliability," "Repair Experience," "Technical Support" and "Future Likelihood of Buying Again."

PC MAGAZINE EDITORS' CHOICE

EXPERTS' Windows SOURCES PICK

PC WORLD BEST BUY

HIGHLY '94 C CADalyst RECOMMENDED

PC MAGAZINE SERVICE & RELIABILITY READERS' CHOICE

PC MAGAZINE EDITORS' CHOICE

May 30, 1995
MILLENNIA P120

"The Millennia is nothing short of the best all-around PC available on the market today."

—*PC Magazine*, April 25, 1995

MVP 1995 WINNER PC Computing

December 1995
MILLENNIA P133

"...we tested the latest PCs until they begged for mercy and found a no-compromise choice: Micron's Millennia P133."

—*PC Computing*, December 1995

800-249-1176

http://www.mei.micron.com

MICRON
ELECTRONICS, INC.

MAGNUM PRO™

Again, Micron leads the industry by making affordable workstation performance a reality. The new Micron Magnum Plus Pro200 expands the limits of a workstation with the most advanced components available. The Magnum Plus Pro200 system combines superior Micron engineering with Intel's advanced Pentium® Pro processor and Windows® NT for the fastest, most reliable system on the market today. The Micron Magnum Plus Pro200—just what you'd expect from Micron Electronics, the technology leader.

intel inside PENTIUM® PRO PROCESSOR

MICROSOFT. WINDOWS NT. READY-TO-RUN

MAGNUM PRO200

- Intel 200MHz Pentium Pro processor
- 256KB internal cache, flash BIOS
- 8X EIDE CD-ROM drive, 3.5" floppy drive
- 16-bit stereo sound & speakers
- PCI 64-bit 3D video, MPEG, 2MB EDO
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows NT Workstation 3.51 CD
- Microsoft Office Pro 95 & Bookshelf 95 CDs
- 5-year/3-year Micron Power warranty*

A • 16MB RAM • 1.0GB EIDE hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$2,999 Business lease $102/month

B • 32MB RAM • 1.6GB EIDE hard drive
• 17" Micron 17FGx, .26dp (15.8" display)
$3,799 Business lease $129/month

MAGNUM PLUS PRO200

- Intel 200MHz Pentium Pro processor
- 256KB internal cache, flash BIOS
- PCI 32-bit Ultra SCSI Fast-20 controller
- 8X SCSI-2 CD-ROM drive, 3.5" floppy drive
- 16-bit stereo sound & speakers
- PCI 64-bit 3D video, MPEG, 2MB EDO
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows NT Workstation 3.51 CD
- Microsoft Office Pro 95 & Bookshelf 95 CDs
- 5-year/3-year Micron Power warranty*

A • 32MB RAM • 2GB Fast SCSI-2 hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$4,199 Business lease $143/month

B • 64MB RAM • 4GB Fast SCSI-2 hard drive
• 17" Micron 17FGx, .26dp (15.8" display)
$5,599 Business lease $176/month

C • 128MB RAM • 9GB Fast SCSI-2 hard drive
• 21" Micron 21FGx, .26dp (20.0" display)
$9,299 Business lease $292/month

Micron Power Warranty & Support

- 5-year limited warranty on microprocessor and main memory
- 3-year limited parts-only system warranty
- 1-, 2- or 3-year optional on-site service agreement for all desktop systems
- 30 days of free Micron-supplied software support
- 30-day money-back policy
- 24-hour technical support

All sales are subject to Micron's standard limited warranties and terms and conditions of sale. Copies of the limited warranties may be obtained on our web site or by calling Micron or at http://www.mei.micron.com.

800-249-1176

http://www.mei.micron.com

MICRON ELECTRONICS, INC.

AWARD-WINNING SYSTEMS

SERVERS

POWERSERVER SMP P133

- Intel 133MHz Pentium® processor
- Dual Pentium SMP ZIF sockets
- 512KB write-back cache, flash BIOS
- Slots: 5 EISA, 2 PCI, 1 EISA/PCI
- PCI 32-bit Ultra SCSI Fast-20 controller
- 8X SCSI-2 CD-ROM drive, 3.5" floppy drive
- PCI 64-bit video, MPEG, 2MB EDO
- Full-size tower with 10 drive bays
- Microsoft® Mouse, 104-key keyboard
- Microsoft Windows® 95 CD & MS Plus! CD
- 5-year/3-year Micron Power℠ warranty*

A • 16MB RAM • 1GB SCSI-2 hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$2,899 Business lease $99/month

B • 32MB RAM • 2GB SCSI-2 hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$3,699 Business lease $126/month

- With second 133MHz Pentium processor....add $399
- With Windows NT Workstation 3.51 CD.....add $99

POWERSERVER SMP P266

- Dual 133MHz Pentium processors
- 512KB write-back cache, flash BIOS
- Slots: 5 EISA, 2 PCI, 1 EISA/PCI
- PCI 32-bit Ultra SCSI Fast-20 controller
- 8X SCSI-2 CD-ROM drive, 3.5" floppy drive
- PCI 64-bit video, MPEG, 2MB EDO
- Full-size tower with 10 drive bays
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows NT Workstation 3.51 CD
- 5-year/3-year Micron Power warranty*

A • 32MB RAM • 2GB SCSI-2 hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
$3,999 Business lease $136/month

B • 64MB RAM • 4GB SCSI-2 hard drive
• 17" Micron 17FGx, .26dp (15.8" display)
$5,399 Business lease $170/month

POWERSERVER SMP P133

Exceptional speed, performance and reliability are just a few of the reasons Micron is a technology leader in PC design. From the award-winning PowerStation to the PowerServer SMP P266, Micron offers a complete range of dependable products to suit every need. When you're considering your next PC purchase, consider a Micron PC.

POWERSTATION P100

- Intel 100MHz Pentium processor
- 8X EIDE CD-ROM drive, 3.5" floppy drive
- 16-bit stereo sound & speakers
- PCI 64-bit video, MPEG, 2MB EDO
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows 95 CD & MS Plus! CD
- 5-year/3-year Micron Power warranty*

A • 8MB EDO RAM • 1.0GB EIDE hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
• Microsoft Works 95 CD
$1,699 Business lease $58/month

B • 16MB EDO RAM • 1.6GB EIDE hard drive
• 15" Micron 15FGx, .28dp (13.7" display)
• Microsoft Office Pro 95 & Bookshelf 95 CDs
$2,099 Business lease $71/month

POWERSTATION LX P100

- Intel 100MHz Pentium processor
- 8MB EDO RAM • 1.0GB EIDE hard drive
- 3.5" floppy drive, flash BIOS
- PCI 64-bit graphics accelerator (1MB)
- 15" Micron 15FGx, .28dp (13.7" display)
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows 95 & MS Plus!
- Microsoft Works 95
- 5-year/3-year Micron Power warranty*

$1,499 Business lease $51/month

MICRON™ HOME MPC™

Reinvent the meaning of work and play. The Micron Home MPC presents a spectacular multimedia experience complete in a single package. The only limit is your imagination.

HOME MPC P120

- Intel 120MHz Pentium® processor
- 256KB pipelined burst cache, flash BIOS
- 8MB EDO RAM • 1.0GB EIDE hard drive
- 8X EIDE CD-ROM drive, 3.5" floppy drive
- 16-bit stereo sound & speakers
- 28.8 fax/modem, speakerphone, voice mail
- Microsoft® Phone telephony software
- Internet ready
  - **Internet in a Box from CompuServe®/Spry**
  - Internet Explorer
- Prodigy®, America Online®, & CompuServe trial memberships
- PCI 64-bit 3D video, MPEG, 2MB EDO
- 15" Micron 15FGx, .28dp (13.7" display)
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows® 95 CD & MS Plus! CD
- **Quicken Financial Pak includes:** Quicken Deluxe 5.0; Quicken® Financial Planner™; Quicken Parents' Guide to Money™; Quicken Family Lawyer™
- **Microsoft Home Pak includes:** Works 4.0 for Windows 95; Publisher Deluxe for Windows 95; Encarta® 96; Encarta 96 World Atlas; Music Central™ 96; Wine Guide; Arcade 1.0; Scenes–Sports Extremes Collection; Cinemania® 96; Julia Child Home Cooking; Best of Windows Entertainment Pack; CD Sampler (includes Fury³ game demo)
- 5-year/3-year Micron Power℠ warranty*

$1,999

- With 133MHz Pentium processor.....add **$100**

HOME MPC P166

- Intel 166MHz Pentium processor
- 256KB pipelined burst cache, flash BIOS
- 16MB EDO RAM • 1.6GB EIDE hard drive
- 8X EIDE CD-ROM drive, 3.5" floppy drive
- 16-bit 3D Wavetable stereo sound
- Advent AV270 2x25 watt stereo speakers
- 28.8 fax/modem, speakerphone, voice mail
- Microsoft Phone telephony software
- Internet ready
  - **Internet in a Box from CompuServe/Spry**
  - Internet Explorer
- Prodigy, America Online, & CompuServe trial memberships
- PCI 64-bit 3D video, MPEG, 2MB EDO
- 17" Micron 17FGx, .26dp (15.8" display)
- *Tool-free* mini-tower or desktop
- Microsoft Mouse, 104-key keyboard
- Microsoft Windows 95 CD & MS Plus! CD
- Microsoft Office 95 & Bookshelf 95 CDs
- **Quicken Financial Pak includes:** Quicken Deluxe 5.0; Quicken Financial Planner; Quicken Parents' Guide to Money; Quicken Family Lawyer
- **Microsoft Home Pak includes:** Works 4.0 for Windows 95; Publisher Deluxe for Windows 95; Encarta 96; Encarta 96 World Atlas; Music Central 96; Wine Guide; Arcade 1.0; Scenes–Sports Extremes Collection; Cinemania 96; Julia Child Home Cooking; Best of Windows Entertainment Pack; CD Sampler (includes Fury³ game demo)
- 5-year/3-year Micron Power warranty*

$2,999

- With 150MHz Pentium processor.....subtract **$100**

Microsoft Home software is the most spectacular collection of educational and entertainment software assembled in a single package. There's something everyone in the family will love from the fabulous new Encarta 96 World Atlas, exclusive with a Micron Home MPC, to the assortment of exciting games in Best of Windows Entertainment Pack.

International Sales 208-893-8970 • International Fax 208-893-8993 • Tollfree from Canada 800-708-1758

Tollfree from Puerto Rico 800-708-1756 • Tollfree from Mexico 95-800-708-1755

- 900 E. Karcher Road, Nampa, ID 83687
- Mon-Fri 6am-10pm Sat 7am-5pm (MT)
- International Sales Hours: Mon-Fri 6am-7pm (MT)
- 208-893-3434 • Fax 208-893-3424
- Purchase Order Fax 208-893-8992
- Technical Support Available 24 Hours A Day–7 Days A Week
- Technical Support E-mail: techsupport.meic@micron.com

800-249-1176

http://www.mei.micron.com

MICRON ELECTRONICS, INC.

©1996 Micron Electronics, Inc. All rights reserved. All prices and specifications subject to change without notice. Micron Electronics, Inc. is not responsible for omissions and/or errors in typography or photography. Intel, Intel Inside and Pentium are registered trademarks of the Intel Corporation. Microsoft is a registered trademark and Windows, Windows NT and the Windows logos are trademarks of Microsoft Corporation. Micron Power is a service mark of Micron Electronics, Inc. All other company trademarks are trade names of each respective company. Prices do not include shipping and handling. 30-day money-back policy does not include return freight and original shipping/handling charges, applies only to Micron brand products and begins from date of shipment. All returns require RMA numbers and must be shipped in the original condition prepaid and insured. Lease prices based on 36-month lease. FAM-PCWD-9606B

YOU WANT MORE?

Custom configure your new Micron system with our most popular options.

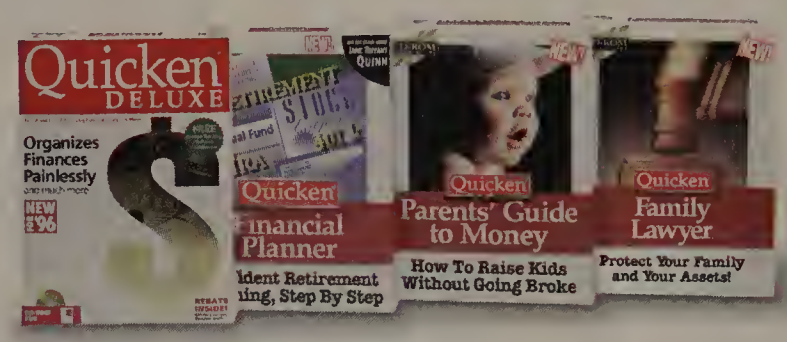
MULTIMEDIA OPTIONS

- Creative Labs SoundBlaster™ 32 Wavetable sound card .....$59 *
- Creative Labs SoundBlaster 32 Wavetable sound card w/2MB RAM ...$149 *
- Advent AV270 Powered Partners stereo speakers $99
- Advent AV370 Powered Partners stereo speakers w/subwoofer $199
- Microsoft® SideWinder 3D Pro joystick $59

Microsoft
WHERE DO YOU WANT TO GO TODAY?™

QUICKEN® FINANCIAL PAK

- Quicken Financial Pak, including: Quicken Deluxe 5.0; Quicken Financial Planner™; Quicken Parents' Guide to Money™; Quicken Family Lawyer™ $69



STORAGE/MEDIA OPTIONS

- Plextor EightPlex 8X 1.2MB/s SCSI internal CD-ROM drive .....$200 **
  (upgrade from systems with standard 8X EIDE CD-ROM drive)
- Iomega SCSI Jaz drive with 1.0GB removable cartridge .....$399 **
- Iomega Zip IDE drive with 100MB removable cartridge $99
- Iomega Ditto 800 (400/800MB) Travan Tape back up w/tape $149
- Iomega Ditto 3200 (1.6/3.2GB) Travan Tape back up w/tape $299
- Conner 4/8GB DDS-2 DAT SCSI Tape back up w/tape .....$999 **

DISPLAY/VIDEO OPTIONS

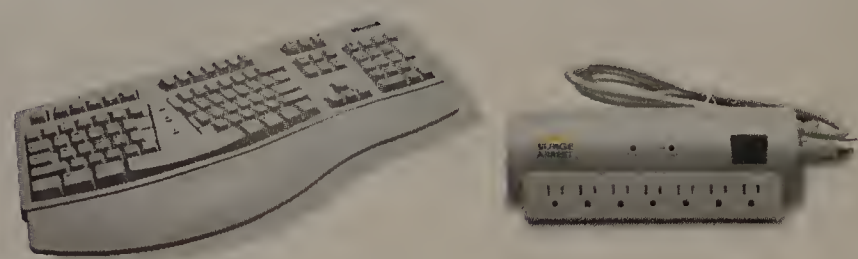
- 17" Hitachi SuperScan 1711 (15.9" display) .26dp color monitor.....$100 ††
- 21" Hitachi SuperScan 2111 (20" display) .26dp color monitor.....$1000 ††
- Diamond Stealth64 video card w/2MB VRAM.....$150 †††
- Diamond Stealth64 video card w/4MB VRAM.....$300 †††
- #9 Imagine 128 video card w/4MB VRAM.....$500 †††
- #9 Imagine 128 video card w/8MB VRAM.....$750 †††

COMMUNICATION OPTIONS

- 28.8bd V.34 internal data/fax modem .....$139 ***
- 28.8bd V.34 internal Telephony data/fax modem w/full duplex speakerphone and voice mail.....$159 †

OTHER OPTIONS

- APC Per7T surge suppressor $39
- APC Pro7T surge suppressor $69
- Microsoft Natural Keyboard $49



Microsoft
WHERE DO YOU WANT TO GO TODAY?™

NETWORKING OPTIONS

- NE2000 Compatible Ethernet ISA NIC (BNC & RJ-45) $49
- 3COM 3C509 Ethernet ISA NIC (BNC, AUI & RJ-45) $99
- 3COM 3C595 Fast Etherlink PCI 10/100 NIC (RJ-45 only) $159
- SMC ISA TokenCard network card $199

* Upgrade from systems with standard SoundBlaster™ 16 sound card
** Requires SCSI Host Adapter
*** V.34 modem includes trial memberships to CompuServe®, Prodigy® and America Online®
† Requires sound card
†† Upgrade from systems with standard Micron 17" 17FGx color monitor
††† Upgrade from systems with standard 64-bit 2MB video card

800-249-1176

http://www.mei.micron.com

MICRON
ELECTRONICS, INC.
900 E. Karcher Road, Nampa, ID 83687
Mon-Fri 6am-10pm Sat 7am-5pm (MT)
International Sales Hours: Mon-Fri 6am-7pm (MT)
208-893-3434 • Fax 208-893-3424
Purchase Order Fax 208-893-8992
Technical Support Available 24 Hours A Day–7 Days A Week
Technical Support E-mail: techsupport.meic@micron.com

Circle 149 on reader service card

Raising the performance bar...again

MGA Millennium - added features at a new low price

When Matrox combined its revolutionary MGA 64-bit chip technology with faster Window RAM memory, a new standard in high performance graphics was established with MGA Millennium. Now Matrox raises the performance bar once again by adding powerful, new features for Windows 95™ and Windows NT™. All this at an incredible low price of only $269 (ESP)*.

Not only do you get blazing fast performance for Windows, video playback, 3D and DOS, you also get Sonnetech's superior color calibration utility and Matrox's new *Desk Navigator*. Sonnetech's color calibration software incorporates Kodak's Precision Color Management System™ so you can match the colors on your monitor perfectly with final printed output. And with Matrox's new *Desk Navigator* utility you can dynamically scroll around a virtual desktop of 2048 x 1536. Also included is optimization and support for 175 monitors and over 20 additional productivity features for Windows 95™ and Windows NT™.

MGA Millennium offers the most reliable and technologically advanced performance in the industry. Matrox's 20 years of excellence and over 100 international awards for the MGA technology, has made MGA Millennium the standard in high performance systems from computer manufacturers such as Compaq, Gateway, Hewlett Packard, and IBM.

For unmatched performance, powerful productivity features, and a new low price of only $269 (ESP), look to MGA Millennium. It's the only graphics accelerator that will meet your standards for high performance.

- 2 or 4 MB PCI base boards, upgradeable to 4 or 8 MB
- Add on hardware MPEG, video capture and TV tuner upgrades
- Optimized drivers with a new MGA PowerDesk control panel for Windows 95™ and Windows NT™
- Professional color calibration utility from Sonnetech
- Free NASCAR® Racing, 3D F/X™, and SoftPEG™ player (retail version only)

MATROX MGA™ POWER GRAPHICS

Designed for Microsoft Windows 95

1-800-844-8316
http://www.matrox.com/mga

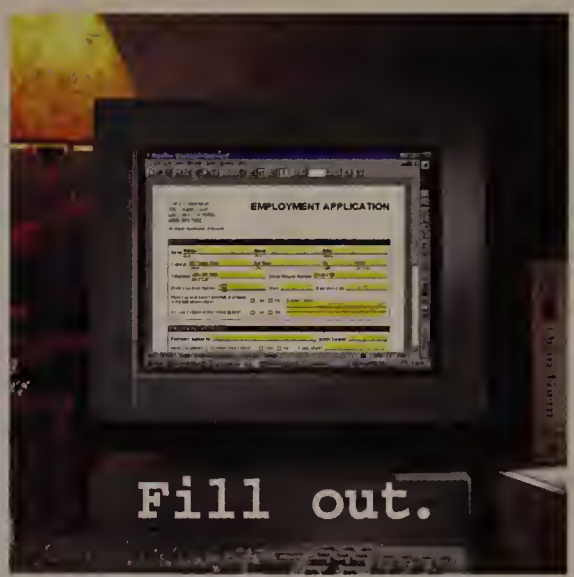
Designed for Macintosh computers with PCI

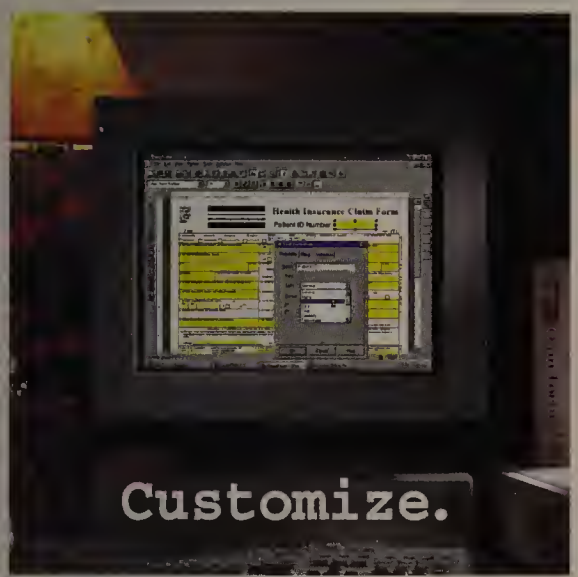
matrox

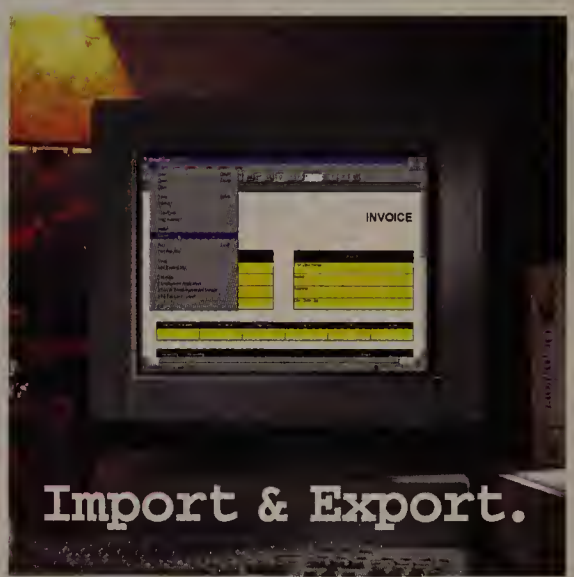
Matrox Graphics Inc. 1025 St. Regis Blvd. Dorval, Quebec, Canada, H9P 2T4 Tel: 514-969-6320 Fax: 514-969-6363 In Quebec, call: 514-969-6330

* Estimated street / selling price for the 2MB version Windows 95 tests conducted by Matrox Graphics Inc using Ziff Davis' Winbench 96 on an Intel Endeavor motherboard configured with Intel P5-166MHz, 32MB of EDO DRAM and 512K cache at 1024 x 768 in 256 colors, 72 Hz, large fonts under Windows 95 The Matrox MGA Millennium and Diamond Stealth 64 Video were were configured with 2 MB of memory, and the Number Nine Imagine 128 was configured with 4 MB of memory, for the PCI bus using driver releases 2 30, 4 02 241 and 2 08 respectively

Circle 143 on reader service card







Now Just

$199.00

Save $150.00 off suggested retail!

Available from Egghead, CompUSA, and Computer City.

Or call Caere at

1-800-223-7346

Ask for discount code PCW796

Turn your paper forms into electronic forms with OmniForm.

Just scan or fax your forms into your computer, and you're ready to tab and type your way through your paperwork. With OmniForm, every bit of data is automatically spell-checked, even calculated and validated if you like. When you're satisfied with the work, print, fax, route, or e-mail your forms with a click of a button.

OmniForm uses Caere's award-winning OCR and Logical Form Recognition™ technologies to automatically convert your forms to look exactly like the originals. You can also use OmniForm's toolset to easily customize existing forms or design new ones. And, OmniForm automatically creates a database that enables you to search, sort, import, and export information to popular databases.

You can let others in your office fill out the forms you create – and protect them from modification – with OmniForm Filler. Just $99 for one user; bigger savings for more users. When it comes to electronic forms solutions, it doesn't get any easier than OmniForm.

Designed for Microsoft Windows 95

caere®

The easy way to make your forms electronic.

Caere, the Caere Logo, OmniForm, and OmniPage are registered trademarks of Caere Corporation. Form Assistant, and Logical Form Recognition are trademarks of Caere Corporation. All other trade names and marks may be trademarks of their respective companies. © 1996 Caere Corporation. All rights reserved. OmniForm is a product of Caere Affiliate Publishing, © 1996 Formonix, Inc. OCR portion © 1996 Caere Corporation.

Circle 40 on reader service card

Databases Step Up to Windows 95

BY CELESTE ROBINSON

Most of us use some type of database every day—a Rolodex of names and numbers, a spreadsheet of expenses, lists kept in a word processing document. But few of us ever create a "real" database application, one with data entry forms, query tools, and report generators. The reason is simple: Databases are hard and usually require the help of a professional database developer. For the most part, users aren't in charge of a database the way they are with word processors or spreadsheets. But a new breed of database management systems promises to change all that by introducing tools that make users more self-sufficient than ever before.

In the last few years, each new wave of database management software has claimed to have two advantages: The programs are easy enough for novices to create simple relational applications quickly and painlessly, yet powerful enough for programmers to develop complex applications. Most of the latest Windows 95 databases are no exception. In this review, we look at four packages that promise to turn database rookies into instant developers: Microsoft's $339 Access 7.0, Lotus's $105 Approach 96, Claris's $199 FileMaker Pro 3.0, and Borland's $299 Paradox 7. A fifth product, Alpha Software's Alpha Five, would have fit nicely into this group, but the package did not ship in time for this review (see "Alpha Hits the Fifth Dimension").

Can the latest Windows 95 databases put you in charge of your data, or do you still need to rely on the expertise of professionals?

We concentrated only on the tools novices are supposed to be able to use to create, manage, view, and analyze a database without writing code. So we didn't try out the programming languages or other high-level features in any of the four packages. We also stayed away from the high-end products like Visual dBASE and Visual FoxPro. Despite their enhanced visual development tools, they're still just that: development tools.

We ran each of our four contenders through a gauntlet of tests in the PC World Usability Lab, focusing on the basics: table creation and modification; data importing; queries; and form and report creation (see "How We Tested Usability").

Bottom line? Don't fire the pointy-headed database developer yet. For complex, mission-critical applications, you still need an expert. If your needs are simple, though, there's a lot of good news. The templates

ILLUSTRATIONS: JOSE CRUZ

Best Buy

Approach was the database our usability testers felt most comfortable with. It received praise for almost all the features we tested (see Usability Test Scores). It's well equipped for the power users who develop workgroup applications, yet it knows how to hide its brawn behind a friendly face, so beginners can get up and running in a reasonable time. The only problem we noticed: Approach tries a little too hard to be friendly. Some of the plain-language terms that it uses for standard database functions confused our experienced testers.

and application generation tools in some of these databases have improved to the point where a greenhorn can put together a basic but fully functioning application.

Approach was our usability testers' favorite, hands down. They found it the least intimidating and the most intuitive. Access and FileMaker Pro tied for second place. Our testers were impressed by the sheer volume of help available in Access, but when it came to doing the work, Approach proved easier to use. What Approach and FileMaker miss in on-screen help, they make up for in intuitive interfaces, while the converse seems true of Access.

Paradox came in a distant fourth—for a database beginner, it's a bad choice. Even with its excellent Experts, its user interface is confusing. But if you're a seasoned Paradox user, we recommend you stay with what you know and upgrade to Paradox 7 to take advantage of its 32-bitness, support for OLE 2, and multithreading capability.

What a Difference a New OS Makes

On the whole, the Windows 95 versions of these programs are minor evolutionary steps. True, they're all 32-bit apps, but the practical implications of this may be lost on most users, except for multithreading, which lets you print in the background while sorting a table, for example. One notable change: Access now supports the Windows 95 Briefcase, which lets mobile users replicate data between a notebook and a desktop record by record, rather than having to copy entire databases between systems.

Most striking, though, is the extent and quality of on-screen help in all four products. Not only are their static help files better than any manual, but the many interactive help agents let users create applications without a degree in computer science.

All four of these packages come with numerous templates (prefab applications) that you can use as is or tweak to your liking. All of these packages have tools that you can use to add custom buttons to forms.

Hope for the Uninitiated

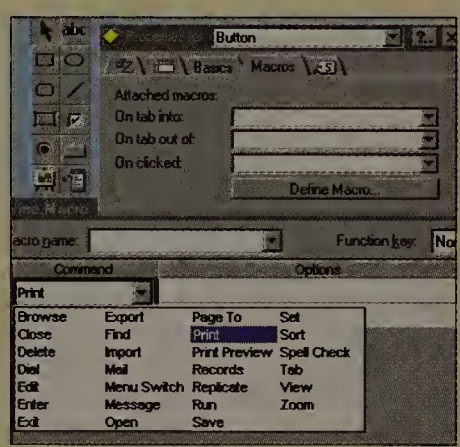
Will any database ever be as easy to use as a word processor? Until recently, we wouldn't have bet on it. But then we saw Wall Data's Salsa (Salsa for the Desktop, previewed in May's *New Products*). Salsa is reinventing the way users manage information (see "Salsa Is Hot, Hot, Hot").

Celeste Robinson is a contributing editor for PC World. *Usability testing supervised by Jeff Kuta; performance testing conducted by Kevin Mitchell and Susan Silvius.*

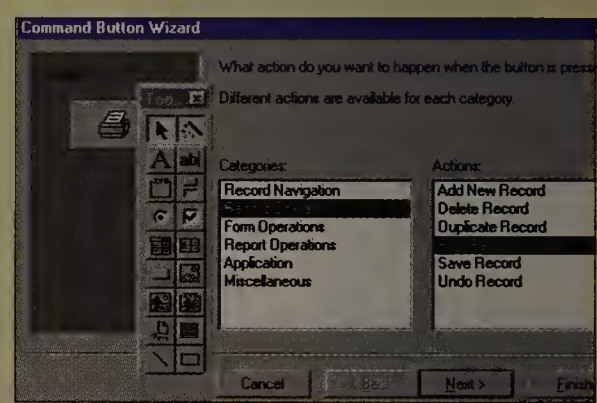
For more information about all products in this article, circle reader service no. 914.

Cute as a Button

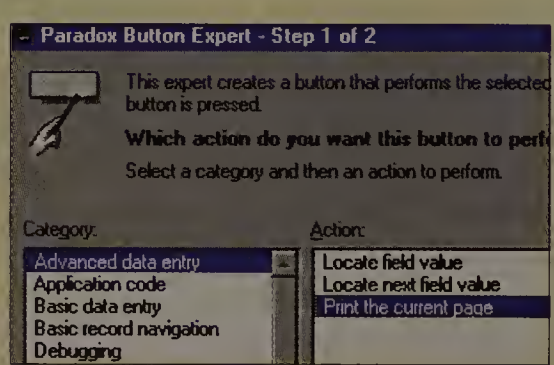
Most database users would love to be able to click a button to print the reports or open the forms they use most. Not too long ago you had to hire a programmer to set up a custom interface with personalized buttons. But now, all the Windows 95 databases reviewed here have tools that let any user create buttons that execute all kinds of commands. This is as close as you can get to programming without having to type in code.



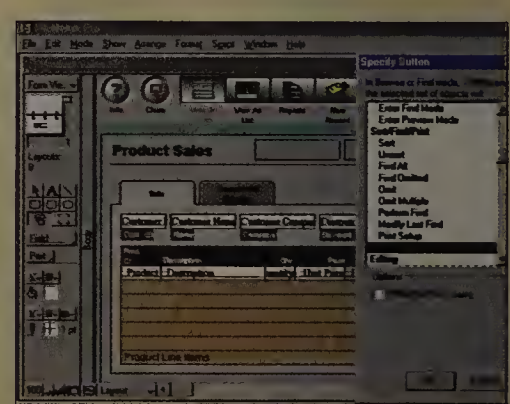
To add magic to an Approach button, define a macro by selecting commands from a pick list.



Access's Command Button Wizard asks what you want a button on a form to do.



Paradox opens its Button Expert when you place a button on a form; you tell it what the button should do.



When you place a button on a FileMaker Pro layout, a dialog box asks you to specify what action you want the button to perform.

You can finally get a modem made just for Windows®.

(Of course, you'll have to pay a little less for it.)

O.K. You know where you want to go. Now, how fast do you want to get there?

With the new Winmodem™ from U.S. Robotics, you actually harness the power of your Windows operating system to fax, check E-mail, and search the net faster and more efficiently than with any other modem.

Not to mention, of course, more affordably.

Plus, unlike other modems, Winmodem gives you the proven compatibility and reliability of Sportster®, the number one selling modem in the world. It's easy to install, it's Microsoft Plug and Play certified, and it can be upgraded instantly to 33.6 Kbps with one call to the U.S. Robotics BBS.

What's more, the exclusive U.S. Robotics *Connections* CD-ROM offers you a wide selection of online products for both home and office.

To learn more about the Sportster Winmodem, or any of the other ways U.S. Robotics takes the limits off how fast you can get what you want, call us at 1-800-DIAL USR, or visit us at www.usr.com.

U.S. Robotics®

NO LIMITS

Sportster Winmodem requires use of the Windows operating system. U.S. Robotics, the USRobotics logo and Sportster are registered trademarks and Winmodem is a trademark of U.S. Robotics. All other product names are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies. Product specifications subject to change without notice. Contact your U.S. Robotics representative for current product information.

Access 7.0

PROS: Help really does; lots of timesaving Wizards

CONS: Confusing interface

NOTES FROM USERS

"The online Help is extensive and informative; it's all you need to learn the program."

"Filtering on a field is much too difficult. The Access developers should buy a copy of Approach."

Access clearly suffers an identity crisis. Even as its helpful Wizards hold your hand while you perform the most mundane task, such as building a table, it proceeds to confuse you with baffling terms in its menus and dialog boxes. The most striking example is the word *database*, which Access uses to mean an entire application, including tables, forms, and reports, while other programs use the term to refer only to tables. But our testers got through the confusion thanks to the extensive help system. Among its other assets, Access's help has lots of step-by-step instructions for accomplishing various tasks, and the natural-language Answer Wizard (standard in all Office applications) won plenty of praise.

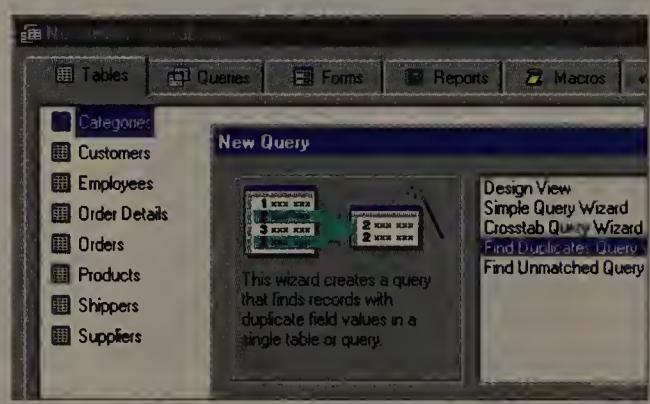
On the downside, the Wizards seemed to give our testers a false sense of confidence. Several testers pronounced some tasks "cool," "easy," and "straightforward," although they hadn't completed them. Some testers didn't even realize that they hadn't done what they were supposed to do. The Wizards' "Finish" buttons were just too reassuring.

Access offers several ways to achieve each task, and this extra functionality at times seemed more of a hindrance than an advantage. For example, our testers struggled with simple tasks like filtering data, in part because Access gives you several ways to perform them, depending on which mode you're using (View or Design). One tester pointed out a major difference between Access and Approach: In Access forms and queries, you have to use *expressions* (Excel-like formulas) to do things that Approach users can accomplish simply by pointing and clicking.

To get you up and running fast, Access offers lots of templates for the most common types of databases. These are great if you can use them as they are, but if you need to customize them, watch out. Leaving the cozy confines of the templates will be confusing to all but the savviest Access users.

Version 7.0 adds many impressive features to Access. It's currently the only database that uses the Windows 95 Briefcase for record-by-record data replication. This allows mobile users to update only the parts of their databases that have changed while they were on the road, rather than having to copy a huge table over from a notebook to the desktop system. As part of Office 95 Professional, Access is a model citizen. You can embed an Access table in a Word document, then make changes directly from within Word by double-clicking the table. You can also work with Excel spreadsheets from within Access and set up merges with Word.

The free Access Internet Assistant add-on converts tables and queries to HTML tables that users can post on their Web sites. You can download the Internet Assistant from Microsoft (http://www.microsoft.com/msaccess/internet/ia/default.htm).

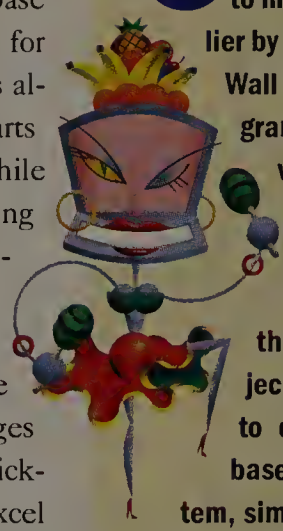


ACCESS 7.0 HAS MANY WIZARDS, including several for queries that help you find duplicate records and cross-tabulate data to see summary information.

In our performance testing, Access was generally a mediocre performer, and in one case—opening a form based on three joined tables—it came in last because it runs a query and gathers together all the records it needs to show before it opens the form's first page. However, once the form opens, there is virtually no delay in paging through subsequent records.

Bottom line: Access is a good choice for intermediate and power users, and for database developers. It's not the best choice for inexperienced people who want to whip up an application in a day or two. *Microsoft Corp.; 800/426-9400.* **Reader service no. 824**

Salsa Is Hot, Hot, Hot



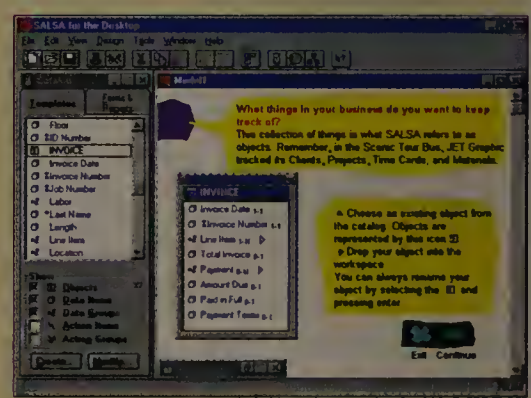
Can you say *paradigm shift?* While other companies struggle to make their packages friendlier by piling on the help utilities, Wall Data has invented a program that may change the way we think about database management. Salsa truly shields users from the technical terms and lets them work with familiar objects instead. You don't want to create a relational database. You need an invoice system, simple as that. So pick an Invoice object from Salsa's list of template models, describe in plain English the way you use them in your business (including rules for acceptable and unacceptable transactions)—and relax.

Behind the scenes, Salsa divides an invoice into separate tables for, say, orders and their associated line items. It then applies your rules to the data to prevent data entry errors. In essence, it creates the relational application for you. Salsa comes with a number of templates for business and personal use to help you get started.

Ironically, for all Salsa's simplicity, if you're a database power user or developer, it's likely to confuse you. No fields, queries, filters, nothing. Just plain old business terminology.

- **Salsa for the Desktop; list price $499, introductory price $149, starter kits $49 each; Wall Data Inc. Salsa Products; 800/777-2572.**

Reader service no. 828



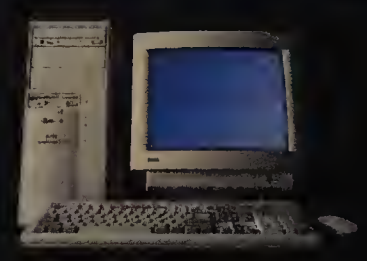
The best way to get started is to select a template, then customize it.

DELL DIMENSION
Reliable PCs For High Performance Computing

DELL DIMENSION™ XPS P133c
133MHz PENTIUM® PROCESSOR

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- ★ **1.6GB Hard Drive [10ms]**
- ★ **15TX Trinitron Monitor (13.7" v.i.s.)**
- 64-bit PCI 2MB DRAM Video
- ★ **8X EIDE CD-ROM Drive**
- MS® Office Professional with Bookshelf for Windows® 95
- Microsoft® Windows 95/30 Days Free Support/MS Mouse
- ★ **3 Year Limited Warranty with 1 Year On-Site Service†**
- ★ ***Upgrade to 3 Years of On-site Service for only $99 more.***
- ★ ***Upgrade to a 17LS (15.7" v.i.s.) monitor for only $225 more.***
- ★ ***Upgrade to a 2.5GB hard drive for only $135 more.***

Business Lease◊: $74/Mo.
Order Code #500275



$1999

BEST BETS FOR PC BUYERS

RANK	OVERALL RATING	MANUFACTURER AND MODEL/ PRICE	CONFIGURATION	COMMENTS
1	8.77	**Dell Computer Dimension XPS P133c** $3,249 w/ monitor	Minitower, 133-Mhz Pentium, 16MB of memory, 1GB hard disk, quad-speed CD-ROM	Dell provides strong and preloads Mi- ing it
2	7.70	[illegible]		

BUSINESS WEEK CONFIRMS WHAT YOU ALREADY KNEW.

In search of the perfect PC? Just ask *Business Week*. In its First Annual Computer Buying Guide, the Dell Dimension XPS P133c was rated #1 among the "Best Bets for PC Buyers."* That's another best for Dell, a company famous for delivering the best performance, the best features, the best value. But that's probably not news to you, is it?

*Tests conducted by the National Software Testing Laboratories, a division of McGrew-Hill, Cos. Published in *Business Week*, November 6, 1995. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lene, Suite D, Austin, TX 78758. ◊Business leasing arranged by Leasing Group, Inc. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo end Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo ere registered trademarks of Microsoft Corporation. ©1996 Dell Computer Corporation. All rights reserved.

TO ORDER
800-847-4057
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03147

How We Tested Usability

Over the past few years, database managers have migrated from development tools to the realm of the novice. Now—at least hypothetically—anybody can develop custom apps without a programming background.

To test whether this theory is true, we brought in a group of PC users with various levels of database experience. A few were beginners, some could be described as power users, and others had some programming experience. Each person was asked to test two or three databases with which they were unfamiliar, rate the difficulty of accomplishing tasks, and share their impressions afterward. The users were also asked to rate the on-screen help. All the ratings were then combined to calculate a total usability score for each product.

Three common findings emerged:

Helpers really help. Our testers deemed the help agents—Wizards, Experts, and Assistants—genuinely useful. Some, especially those with DOS database experience, resisted them at first. Novice users took to helpers enthusiastically.

Importing is a pain. Bringing data into a table was a headache for almost everyone. We asked the testers to import information from an Excel spreadsheet and append it to a data file. With Access and Paradox, this is a two-part procedure, a factor that was not immediately obvious. And FileMaker Pro can't import Excel files directly.

Modes are confusing. In these programs our testers had to toggle between data and design modes, an unintuitive concept. Approach lets you view data in design mode—but you can't edit it.

In the end, we found that database programs have come a long way in catering to the end user, but stumbling blocks still exist. New users will need time to solve these problems. For the scores our testers gave individual tasks, see the table below.

Usability Test Scores

	Access 7.0	Approach 96	FileMaker Pro 3.0	Paradox 7
On-screen help				
Quality of information	5.3	4	3.3	3.7
Overall efficiency	5.3	4	3.3	4.2
Data manipulation				
Import Excel spreadsheet, append data to table	4	4	1	1.7
Replace fields with values	2	4.4	4	2.7
Add image to record	4	2.7	4.3	3
Filter on a field	2.7	4.4	4	4
Filter and sort on a field	2.7	5.3	4.4	2
Delete records	5.3	4.7	4.3	2.7
Use a form for search and replace	2.7	5.3	3.7	2.3
Table manipulation				
Change field name	5.3	4	3.7	5.3
Add field to a table	5.3	4	4	4.3
Add drop-down menu to form	2.7	4.7	4.3	3.3
Create new form from a single table	4	4.4	4.9	4.3
Create new report from a single table	4.7	5	4.7	4.3
Create new report from two related tables	2	5.3	4.3	3.7
OVERALL USABILITY SCORE (6 maximum)	3.9	4.4	3.9	3.4

Approach 96 Edition for Windows 95

PROS: Easy-to-follow menus and dialog boxes, automatic indexing

CONS: Quality of help uneven, clunky import of 1-2-3 files

NOTES FROM USERS

"Approach calls things what they are. 'Create' means create. 'Browse' means look through some records."

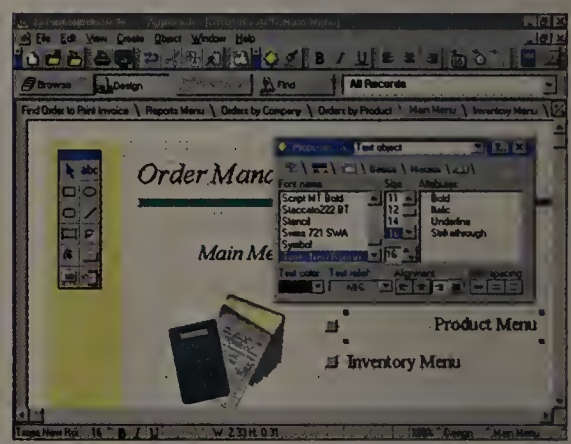
"Adding a field in one view didn't guarantee its appearance in the other views."

Approach was designed as an end-user database from the get-go, and it shows. Our testers didn't think Approach's help system was as extensive as Access's, but then, they didn't really need a lot of help to use Approach. Approach still got the highest score for overall ease of use. This, combined with its speed and unique reporting features, earns it our Best Buy.

Several factors contribute to Approach's high usability scores (see Usability Test Scores). One important feature is the way it automatically indexes. In Access and Paradox, you need to index files yourself to get optimal performance on searches and sorts. Approach does this for you the first time you search or sort on a field.

Approach has lots of Assistants that help with tasks like designing forms, reports, form letters, and charts. The Assistants have good visual cues that help you pinpoint exactly what you are doing each step of the way. This is especially welcome when you're creating cross-tab reports and charts.

Two unique Approach features are PowerClick reporting and Drill Down To Data. The former lets you drag fields in report-



IN APPROACH'S DESIGN MODE, you can open the tabbed inbox and use it to change the properties of whatever objects are selected.

There Is Only One Choice For Data Compression.

PKZIP® for Windows

The growth of the Internet and the increased use of World Wide Web browsers is creating a greater need to compress data files. Saving disk space and saving on-line phone charges are big benefits of compressing data files with ***PKZIP® for Windows***. PKZIP for Windows compresses files an average of 50-70% with many large text and database files compressing well over 90%. PKZIP's simple point-and-click interface lets you easily compress one file or all files on an entire hard drive, and store them in the .ZIP file. PKWARE® provides the best and fastest data compression technology on the market, try it and see!

PKZIP for Windows allows you to easily open files created with PKZIP for DOS Version 2.04g. PKZIP is also compatible with Windows 3.1 or higher and Windows 95.

Use PKZIP compression whenever you are:

At Home
The Internet contains many .ZIP files you can access through a World Wide Web browser. PKZIP also lets you archive files such as the digitized family photo album or annual budget in .ZIP files, saving you space on your hard drive.

On the Road
Use .ZIP files when sending email, storing presentations, or transferring files between your office PC and your laptop.

At the Office
Network and system administrators save space on their servers and reduce traffic over the intranet or corporate network using .ZIP files.

Data compression is as important now as it was when hard drives were small and modems were slow. New software applications and the files they create continue to grow in size. Intranet and Internet traffic are growing at a phenomenal rate. These growing trends make zipping and unzipping data files an important utility for everyone who uses a personal computer.

PKZIP for Windows $49, PKZIP for DOS $47 plus shipping and handling.

To order call (414) 354-8699
or visit our Web Site http://www.pkware.com

Other PKWARE Products

Put Your Executables on a Diet

PKLITE™ increases your valuable disk space by compressing DOS and Windows 16-bit executable (.COM, .EXE and .DLL) files by an average of 45%. The operation of PKLITE is transparent, all you will notice is more available disk space! Price $46

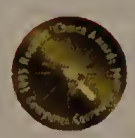
Software developers, save disk space and media costs with smaller executables. You can distribute your software in a compressed form with PKLITE Professional.™ PKLITE Professional gives you an extra option to compress files so that they cannot be expanded by PKLITE. This discourages reverse engineering of your programs. Price $146

Put Compression Into YOUR Application

The PKWARE Data Compression Library® products allow you to incorporate data compression technology into your software applications. The application program controls all the input and output of data, allowing data to be compressed to or extracted from any device or area of memory.

The all-purpose Data Compression Algorithm compresses ASCII or binary data quickly. The routines can be used with most compatible language compilers. Separate DOS, DOS32, Windows, OS/2, Win32 and UNIX versions are available! Call for pricing.

PKWARE® INC
The Data Compression Experts®
9025 N. Deerwood Drive / Brown Deer, WI 53223 USA
FAX: 414-354-8559 BBS: 414-354-8670
Email: info@pkware.com



1996 Government Computer News Best New Product Award at FOSE Finalist
1995 Computer Currents Readers Choice Award
1992-1995 PC Computing World Class Award
1993 Shareware Industry Award
1992 Premiere Computing Magazine Award
1992 Dvorak/Zoom Award

PCW-796

Copyright 1996 PKWARE, Inc. All Rights Reserved. All trademarks or registered trademarks are property of their respective owners.

Circle 212 on reader service card

design mode to create groups, or drag them in a worksheet to formulate a cross-tab without running through the steps of the Crosstab Assistant. Drill Down To Data shows you the specific data underlying a slice of pie, a chart's bar, or a summary in a cross-tab. All you have to do is select the piece whose details you want to view and click the Drill Down To Data button.

As a full member of Lotus's SmartSuite, Approach has TeamMail for sending messages and attaching data files and views. Security features have been improved, and Notes users can now get to their data directly from Approach.

Surprisingly, Approach does not allow you to work directly with named ranges from its own suitemate, 1-2-3. You must first load the worksheet containing the named ranges that you want to use and then run 1-2-3 in the background.

Despite these shortcomings, Approach is by far your best bet here for making it all the way through a database application project without having to call in expert help. If you're a beginning or intermediate database user, put Approach at the top of your list.

Lotus Development Corp.; 800/343-5414, 415/335-2200. **Reader service no. 825**

FileMaker Pro 3.0

PROS: Lots of helpful templates; Windows 95 and Macintosh users can share data

CONS: No helpers for mail merge and layout design; somewhat limited relational capabilities

NOTES FROM USERS

"Can't import Excel spreadsheets? Are they kidding me?"

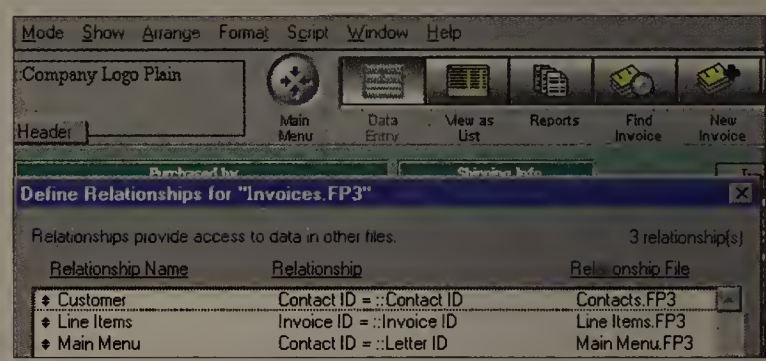
"Commands and functions use less-technical terms than in Access."

A few factors make FileMaker Pro quite different from the other products reviewed here. One is the lack of a programming language, so it's clearly meant for end users and is not as appealing to power users. Another is the way it handles text fields: In FileMaker, they have no set length, a flexibility that any user should appreciate. Third, FileMaker Pro 3.0 makes no distinction between forms and reports. You view, edit, and print data using the same "layouts."

But perhaps most important, FileMaker Pro is the only true cross-platform database management program in this roundup. Since its Windows and Mac versions are identical, it lets Windows and Macintosh users work with the same applications and access the same data.

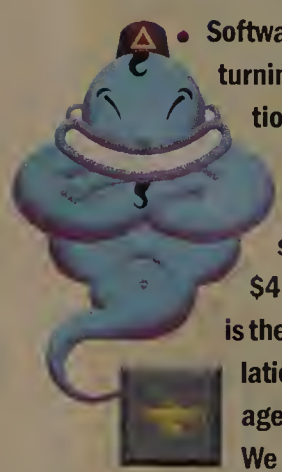
FileMaker Pro started out as a truly easy-to-use flat file (nonrelational database manager). With its clever pseudorelational scheme, it lets you handle some simple relational projects, but users needed more, and Claris listened. Now, with version 3.0, FileMaker Pro has gone fully relational.

FileMaker scored the best of all the products we tested in the table manipulation usability test, and came in second for data manipulation (see Usability Test Scores). Most of our testers judged the program very easy to navigate but found its help lacking, a factor that reduced its overall usability score.



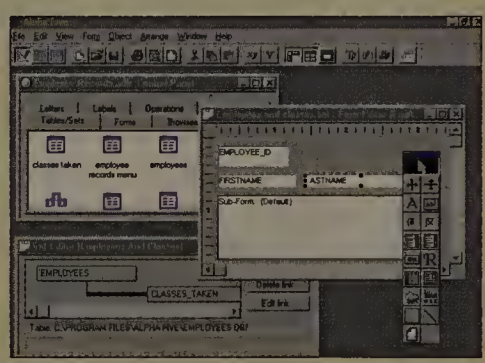
FILEMAKER PRO LETS YOU DEFINE RELATIONSHIPS between files so you can use the files together in the same layout.

Alpha Hits the Fifth Dimension



Amid the clash of the Microsoft, Borland, and Lotus titans, little Alpha Software has been quietly turning out capable relational database programs for a decade. Alpha Five 2.0 sells for as little as $40 on the street and is the most affordable relational database package for Windows 95. We were astonished by the features you get for the money. Alpha Five 2.0 comes with customizable toolbars, importing and exporting for different file formats, the ability to save query definitions and query results, a mail merge function with a built-in letter editor, plenty of application templates, and cross-tabs. It also comes with a host of help agents (*Genies*) for setting up forms, reports, command buttons, labels, and mail merges. However, Alpha Five lacks graphing and charting tools, direct client/server support, and a programming language, so the program doesn't make the big leagues.

But it has a very cool approach to data management. Unlike other products where commands for actions such as adding files together are scattered through menus and toolbars, each database object in Alpha has a Control Panel with a tab labeled Operations. When you click New Object in this tab, the New Object Genie presents a menu of useful functions, including Append, Copy, and Crosstab. Some of these Genies are not as useful as they could be, though. For example, the Crosstab Genie was cryptic, and we had to turn to on-screen help to figure it out.



Alpha Five makes the development environment appealing to power users and beginners alike.

Alpha has an extensive collection of built-in validation rules, which would take some programming in other products. For example, if you define a field as a credit card number, the program verifies that a Visa number fits the Visa account number format and reject the entry if it doesn't.

Alpha Five is reasonably easy to use, it can handle projects requiring a moderate level of relational database power, and its price can't be beat.

- **Alpha Five, list price $49; Alpha Software; 800/451-1018**
  Reader service no. 829

KEEP IN STEP

with your desktop performance needs – now, for the future.

In order for your notebook to keep in step with no compromise desktop performance, you need the Everex STEP Note Plus. The STEP Note Plus comes packed with features equal or better than any desktop PC:

No compromise performance
Up to 133MHz Pentium processor
Up to 40 MB RAM
256KB synchronous L2 cache

Clear, fast graphics
Huge 11.3" or 10.4" DSTN or TFT display
800 x 600 x 256 colors SVGA resolution on 11.3"display
Accelerated PCI graphics

Modularity for customized tasks
Removable floppy drive provides:
4X CD ROM capability
Support for second battery

Removable Hard Drive
Up to 1.3GB

Multimedia Subsystem Keeps *You* in Step
16-bit stereo sound
Built-in stereo speakers
Built-in microphone

Room to Grow
Full PCMCIA support
Docking station support (shown in screen)
Port Replicator support

Keep the Beat
2 year limited warranty[1]
48 hour Hot Swap for first year

All at an affordable price

EVEREX

http://www.everex.com
Tech Support: **1-800-262-3312,**
24 hours a day, 7 days a week

1-800-EVEREX1

Circle 107 on reader service card

intel inside pentium® PROCESSOR

STEPNote 48 HotSwap

Designed for Microsoft Windows 95

energy EPA POLLUTION PREVENTER

The Intel Inside logo and Pentium are registered trademarks and the Pentium Processor logo is a trademark of Intel Corporation. Microsoft, Windows and the Windows logo are registered trademarks of Microsoft Corporation. The EnergyStar emblem does not represent EPA endorsement of any product or service. [1]One year on battery and LCD. Battery rated as percentage used after first 90 days.

Another important usability enhancement is automatic indexing. Like Approach, FileMaker creates an index the first time you search on a particular field. To speed things up, the index is then used for subsequent searches on the same fields. This transparent indexing is an important benefit for users who don't want to be concerned with such matters. One caveat, though: FileMaker took an extremely long time to create the indexes during the first search on a field (see the Test Report).

FileMaker is the only program in this roundup that doesn't save queries: Each time you want to display selected records, you have to recreate a query. It also has a confusing mail merge function and lacks charting and cross-tab tools.

Because of our usability results, and because there's no programming language, we feel that FileMaker Pro is best suited for beginning database users who don't need (or want) the complexity of the other products we looked at. It is also best suited for mixed-platform (Windows and Mac) workgroups. *Claris Corp.; 800/544-8554, 408/727-8227.* **Reader service no. 826**

FEATURES COMPARISON Windows 95 Databases

Ratings = poor, fair, good, very good, excellent, and n/a (not applicable)

Standard features	Access 7.0	Approach 96	FileMaker Pro 3.0	Paradox 7
List/upgrade price	$339/$129	$105/none	$199/none	$299/$99
Weekday phone support (hours)	12 [1]	12 [2]	12 [3]	11
Online, fax support	AOL, CIS, fax, WWW	CIS, fax, WWW	AOL, CIS, fax, WWW	BBS, CIS, fax, WWW
File import/export capabilities	good	very good	good	good
Native data access	.dbf, .mdb, SQL, .xls	.db, .dbf	FileMaker Pro	.db, .dbf
Scripting	very good	excellent	very good	poor
Programming language	VBA	LotusScript	n/a	ObjectPAL
SQL support	via ODBC	DB2, Oracle, SQL Server	n/a	via IDAPI
Save queries	good	good	n/a	good
Customizable table view	good	very good	poor	very good
Mail merge	very good	fair	poor	very good
Data entry checking	good	very good	good	very good
Application templates	very good	very good	excellent	good
Field types	very good	good	good	excellent
Spelling checker	good	good	good	poor
Relational capabilities				
Graphical relationship map	good	good	poor	good
Drag and drop or point and click joins	good	good	good	good
Cascading updates for data changes	good	poor	poor	fair
Prohibit deletes	good	good	good	good
Forms, reports				
Style sheets	very good	good	fair	good
Text and object formatting	good	very good	very good	excellent
Data entry facilitators	excellent	very good	very good	very good
Cross-tabs	very good	excellent	n/a	good
Charts	very good	very good	n/a	very good
Help agents				
Database setup	excellent	good	good	good
Import	very good	fair	poor	good
Queries	good	very good	poor	poor
Report	very good	very good	poor	very good
Forms	very good	very good	poor	very good
Button	good	poor	poor	good
Charts	good	good	n/a	good
Cross-tabs	good	good	n/a	poor
Mail merge	very good	good	poor	good

[1] Two free calls, [2] 90 days toll-free, [3] 8 hours Friday.

A killer light show, multiple graphics and a hip-hop beat: Accounting cuts its first CD.

©Hewlett Packard 1996. All Rights Reserved.

HEWLETT® PACKARD

Introducing the HP SureStore CD Writer.

Excuse Accounting for acting a little cool, but they've just put together the hottest presentation in the company with the new HP SureStore CD-Writer.

And if they can do it, you can, too.

The possibilities are endless. You could store an entire multimedia show, with moving images, music and graphics. Or distribute huge files, price lists, catalogs — even years of tax records.

The HP SureStore CD-Writer has everything you need to easily create and launch your own CDs. You get 2x recording speed and a 4x reader in one. Universally accepted CDs offer 650 MB of space that can be read by millions of CD players worldwide.

So whether you're a major multimedia supplier, an in-house service, or one of those groovy cats in accounting, the HP SureStore CD-Writer is the best way to set you apart. For more information on how to cut your first CD, call 1-800-826-4111, ext. 1261.

Paradox 7

PROS: Good help and lots of high-end features for developers and power users

CONS: Interface intimidating to new database users

NOTES FROM USERS

"Report generation was a breeze with the Report Expert."

"Why is there no sorting in forms? This is inexcusable!"

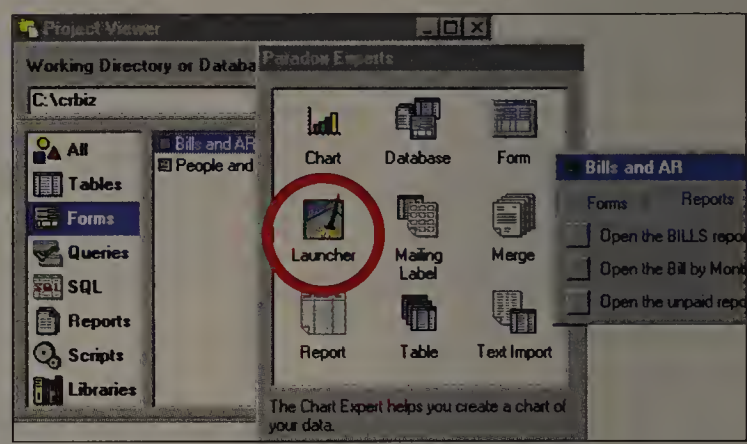
Paradox 7 has many more helpers, which it calls Experts, than its last version. Still, it was the least popular among our usability testers. Most expressed the opinion that Paradox is a powerful tool for database application developers rather than for end users, and we are inclined to agree with their conclusion. The most common reaction from our testers was, in a word, "confusing."

Despite its relatively low overall usability score, Paradox did well in the help category. Some testers commented that they preferred the Paradox Experts to the Access Wizards because the former were more intuitive and offered more options. And Paradox users can enlist the help of the new Experts in database creation. A Database Expert even generates entire applications, including tables, forms, and reports. If you don't need a complete relational application, or if you prefer to set up your own relationships after creating tables, there's a Table Expert with a good selection of business and personal templates. Other useful new helpers are the Chart Expert, the Mail Merge Expert (which works with Word and WordPerfect) and the Text Import Expert.

Our testers were quick to discover several gaping holes in Paradox. One is the inability to sort from within a form. But overall, the chief complaint concerned the unintuitive interface. In our performance testing, Paradox fared pretty well. It got the best score for opening a form with joined tables and was fastest at generating a report with selected records. When it came to searching on nonindexed values, Paradox's performance depended on the size of the file. It did better than the rest when searching on a file of 22,000 records but fell to second place when querying a file with 115,000 records.

Based on our usability results, we don't recommend Paradox 7 to novices. Unless you're already an expert in its programming language, ObjectPAL, it's hard to justify the time that learning the program will require. *Borland Int'l; 800/233-2444, 408/431-1000.*

Reader service no. 827



PARADOX 7'S NEW EXPERTS INCLUDE THE LAUNCHER. This helper creates a tabbed dialog box with buttons for opening database objects you choose.

TEST REPORT Databases in the Fast Lane

	Access 7.0	Approach 96	FileMaker Pro 3.0	Paradox 7
Initial query on nonindexed value—customer database (980 records)	0.8	1.1	0.7	0.8
repeat query	0.8	0.8	0.7	0.8
Initial query on nonindexed value—sales database (22,000 records)	2.6	7.4	109.8	1.7
repeat query	2.6	0.8	4.9	1.7
Initial query on nonindexed value—parts database (115,000 records)	7.9	53.2	468.4	12.2
repeat query	7.9	0.9	11.2	12.2
Query on indexed value—customer database	0.8	0.7	0.6	0.8
Query on indexed value—sales database	1.2	0.8	4.9	1.0
Query on indexed value—parts database	1.0	0.9	11.2	0.9
Open form	50.0	6.3	3.5	2.6
Query	1.0	0.9	0.6	2.2
Generate report using selected records	31.0	96.4	73.2	23.0
Initial sort items by price	24.7	24.4	223.3	51.5
repeat sort	24.7	1.6	223.3	51.5

Time in seconds

Methodology We tested each product on a Compaq Deskpro 5100 configured with a 100-MHz Pentium processor, 16MB of RAM, 256K of secondary cache, a 1083MB EIDE hard drive, and an integrated graphics controller with 1MB of VRAM. We installed Windows 95 using the default setup. We ran a query on a nonindexed value in each database file and recorded the time it took to regain cursor control. We repeated each nonindexed query because two of the programs autoindex the first time a query is run. We also ran a query on an indexed value in each database and recorded the time to regain cursor control. We opened a form that contained related records from each database file, then searched for a value. We generated a report that subtotaled one table based on the other two, and timed how long it took to display the first page of the report. We sorted items in the parts database by price. Tests designed and conducted by the PC World Test Center. All rights reserved.

☐ Single-file queries ☐ Relational operations (3 tables) ■ Reports ☐ Sort

FASTER THAN A SPEEDING COW.

ABLE TO LEAP TALL TOWERS AT A SINGLE BOUND.

LOOK, ON YOUR DESK! IT'S A BIRD! IT'S A PLANE! IT'S A CYRIX P200!

1-800-844-7168

http://www.cyrix.com

The blazing Cyrix 6x86™ P200 joins our family of high-performance, custom-built PCs!

Today, you have a choice. Get a Pentium-based PC and join the earthbound crowd. Or let us build you a Cyrix PC – and *fly.*

The Cyrix 6x86 processor features unprecedented performance and compatibility.

Like our P133, P150 and P166 PCs, the new P200 PC is based on our award-winning Cyrix 6x86 processor technology. We surround this "Pentium-killer" chip with the fastest industry-standard components we can find. Just choose the ones that meet your needs, and let us put it all together for you.

Uncompromising compatibility and expandability.

Cyrix processors are already at work in over six million PCs, running applications under Windows® 95, Windows NT,™ Windows,® OS/2,® MS-DOS,® Netware,® Solaris™ and Unix.® So you can rest assured you'll be able to run all the software you use today, along with that of tomorrow. And, when you're ready to add tomorrow's *components,* you'll be able to do it with plug-and-play ease.

Outstanding service and support.

You'll enjoy a 3-year limited warranty* along with one year of on-site, next-business-day service. Plus seven-day, 24-hour toll-free technical support. And with our 30-day money back guarantee, you can order risk-free. Do it *today!*

Let us custom-build the ultimate PC for you!

Call to talk to one of our friendly, knowledgeable representatives today. Cyrix PCs carry a 30-day, money-back guarantee, so you can order risk-free!

30-Day Money Back Guarantee

1-800-844-7168

Visit our web site at http://www.cyrix.com for latest pricing and product information.

Cyrix 6x86-P200 PC Option I - $2,699

Business Lease $96/mo.

- Cyrix 6x86-P200+ processor, 256K synchronous pipeline burst cache
- 16MB Performance EDO DRAM (256MB max)
- Matrox® MGA™ Millennium video, 2MB WRAM
- 2.5GB EIDE hard drive, 3.5" floppy
- 8X EIDE CD-ROM drive
- Sound Blaster™ 16 stereo sound, 2 piece stereo speakers set
- 15", 1280NI, .28mm monitor
- Minitower or desktop case
- 104-key keyboard, two button mouse
- MS Windows® 95 pre-loaded
- 3-year limited system warranty*

Cyrix 6x86-P200 PC, Option II - $3,299

Same configuration as Option I, but with:

- 17", 1280NI, .26mm monitor
- Sound Blaster AWE32™ wavetable sound
- Hi-fidelity multimedia speaker system w/Subwoofer
- 28.8 fax/modem/telephone answering device

Cyrix 6x86-P200 PC, Option III - $4,699

Same configuration as Option II, but with:

- 32MB Performance EDO DRAM (256MB max)
- 4.5GB Fast SCSI-2 hard drive
- Adaptec 2940U Ultra SCSI controller

Cyrix 6x86-P166 PC Option I - $2,499

Business Lease $87/mo.

- Cyrix 6x86-P166+ processor, 256K synchronous pipeline burst cache
- 16MB Performance EDO DRAM (256MB max)
- 2.5GB EIDE hard drive, 3.5" floppy
- Matrox® MGA™ Millennium video, 2MB WRAM
- 8X EIDE CD-ROM drive
- Sound Blaster™ 16 stereo sound, 2 piece stereo speakers set
- 15", 1280NI, .28mm monitor
- Minitower or desktop case
- 104-key keyboard, two button mouse
- MS Windows® 95 pre-loaded
- 3-year limited system warranty*

Cyrix 6x86-P166 PC, Option II - $2,999

- Same configuration as Option I, but with:
- 17", 1280NI, .26mm monitor
- Sound Blaster AWE32™ wavetable sound
- Hi-fidelity multimedia speaker system w/Subwoofer
- 28.8 fax/modem/telephone answering device

Cyrix 6x86-P150 PC - $2,199

Business Lease $78/mo.

- Cyrix 6x86-P150+ processor, 256K synchronous pipeline burst cache
- 16MB Performance EDO DRAM (256MB max)
- 1.6GB EIDE hard drive, 3.5" floppy
- 64-bit PCI video, 2MB 45ns EDO DRAM
- 8X EIDE CD-ROM drive
- Sound Blaster™ 16 stereo sound, 2 piece stereo speakers set
- 15", 1280NI, .28mm monitor
- Minitower or desktop case
- 104-key keyboard, two button mouse
- MS Windows® 95 pre-loaded
- 3-year limited system warranty*

Cyrix 6x86-P133 PC - $1,999

Business Lease $71/mo.

- Cyrix 6x86-P133+ processor, 256K synchronous pipeline burst cache
- 16MB Performance EDO DRAM (256MB max)
- 1.6GB EIDE hard drive, 3.5" drive
- 64-bit PCI video, 2MB 45ns EDO DRAM
- 6X EIDE CD-ROM drive
- 15", 1280NI, .28mm monitor
- Minitower or desktop case
- 104-key keyboard, two button mouse
- MS Windows® 95 pre-loaded
- 3-year limited system warranty*

See us at PC EXPO booth 2262 in the Main Hall.

Cyrix® Advancing the Standards

©1996 Cyrix Systems Direct, L.P. • P.O. Box 853923, Richardson, TX 75085-3923 • 800-340-7501 • FAX 800-340-7463 Sales hours: Mon-Fri 7am-8pm, Sat 9am-6pm (CST). All rights reserved. Availability, prices, specifications and configurations subject to change without notice or obligation. Prices do not include shipping and applicable sales tax This offer available in the U.S. only. Cyrix Systems Direct, L.P. cannot be responsible for omissions and/or errors in typography or photography. Cyrix is a registered trademark of Cyrix Corporation. Intel and Pentium are registered trademarks of the Intel Corporation. MS, MS-DOS, Windows, Microsoft and the Windows logo are registered trademarks of Microsoft Corporation. All other trademarks are the property of their respective owners. All returns require RMA numbers and must be shipped in the original condition prepaid and insured.

* Write to above address to request our written warranty statement. Prices shown include one-year on-site service contract provided by DecisionOne Corporation. On-site service not available in some areas. Lease prices based on a 36 month lease.

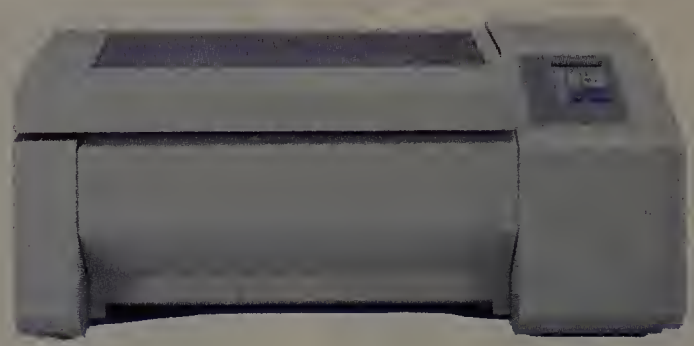
1-800-844-7168

http://www.cyrix.com

Circle 66 on reader service card

ANNOUNCING THE *MOST RELIABLE,* HIGHEST-PERFORMING, *INVOICE* HANDLING, BAR CODE *PRINTING, DATA* PROCESSING, WITH *THE LOWEST COST* OF OWNERSHIP IN *ITS CLASS, LINE* IMPACT PRINTER *FROM TALLY!*

T6045 line impact matrix printer **under $4,500!**



PC MAGAZINE EDITORS' CHOICE™
November 7, 1995
Mannesmann Tally T6045

The T6045 is an entry level line impact matrix printer that's short in cost-but not in performance. From general data processing to bar codes & other industrial graphics, the T6045 can print up to 450 lines per minute, and can handle a 80,000 pages a month with ease.

Versatility is the T6045's middle name. It comes equipped with ***three*** industrial graphics languages standard plus POSTNET, giving you a variety of options for graphics handling. And, with a standard parallel & serial I/O or optional Twinax/Coax interface, most network setups aren't a problem either.

In the cost of ownership category, the T6045 triumphs, ***saving up to $1,663 over its' closest competitors*** in the first year of ownership. Isn't it time you printed on a Tally?

JUST CALL 1-800-843-1347 EXT. 575 for more information, or contact your local reseller.

Tally®
printers

[Making An Impact On The Way You Print]

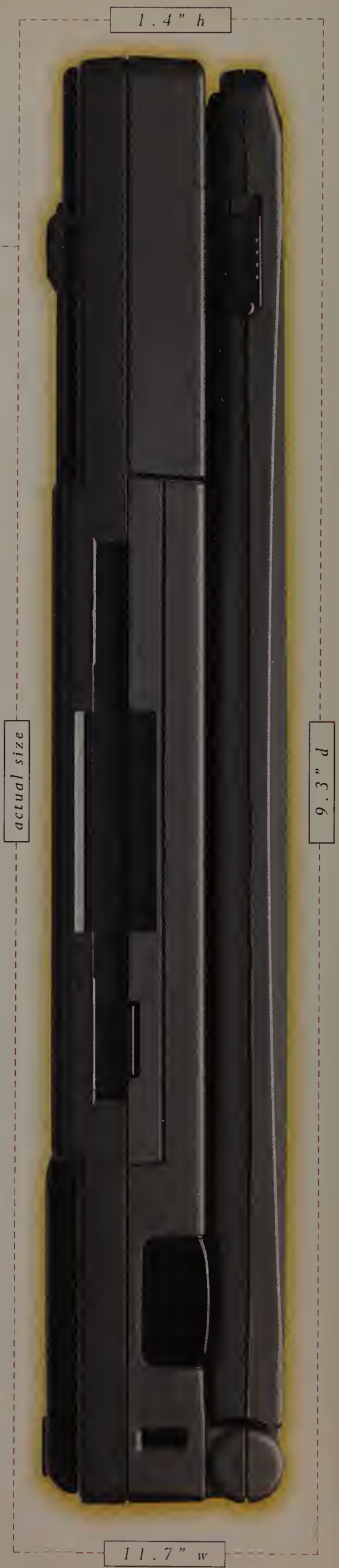
a **mannesmann** *technology company*

©Mannesmann Tally Corp. 8301 South 180th Street, Kent, WA 98064. Windows is a registered trademark of Microsoft Corporation in the U.S. and other countries. All other listed trademarks are trademarks or registered trademarks of their respective companies.

Circle 142 on reader service card

YOU CAN NEVER BE TOO *Rich*... OR TOO Thin

- *11.3" Super VGA dual-scan or TFT active-matrix screen with 1MB PCI graphics accelerator*
- *100, 120 or 133MHz Intel Pentium® processor and up to 40Mb EDO memory*
- *Integrated 1.44Mb floppy disk drive*
- *87-key keyboard with Windows '95 keys*
- *TwinTouch™ touchpad pointing device*



So why carry a big, fat notebook when you can have the feature-rich, ultra-thin Slimnote 700?

The optional base station fits neatly beneath the Slimnote 700 for maximum portability

The new, extremely thin Twinhead Slimnote 700 has everything you need to get the job done. Whether you're polishing up a spreadsheet somewhere over Colorado, or giving a multimedia presentation in Tokyo, the Slimnote 700 delivers.

Built around a revolutionary 1-in-2 design, the Slimnote 700 gives you the ultimate in flexibility. The lightweight, slimline mobile station packs all the high-performance features you'd expect to find in a desktop PC into a 1.4", sub 5 lb notebook with features like a fast Pentium processor, EDO system memory, up to a 1.2 Gb hard drive, 16-bit stereo sound and a full-color display. When you're ready for multimedia features like a 6x CD-ROM drive and amplified speakers, just add the optional lightweight base station and you have a multimedia powerhouse!

intel inside pentium PROCESSOR

Designed and manufactured by Twinhead, your True Source for notebook PCs, the Slimnote 700 delivers unsurpassed performance in an incredibly efficient package. True value that can only be delivered by a true manufacturer. Plus, all Slimnotes are backed with our exclusive ExpressCare program, providing you with 48-hour service and toll-free support.

EXPRESSCARE TWINHEAD

base station

- *6X CD-ROM drive with software eject function allows you to quickly access all of your CD-ROM applications*
- *NTSC/PAL RCA jack lets you connect to a VCR or TV monitor, giving you true multimedia flexibility*
- *Two amplified-stereo speakers provide unsurpassed sound*
- *32-bit PCI slot greatly increases expansion capabilities*

Two steps ahead™

Twinhead

1-800-995-8946 *(West)*
1-800-552-8946 *(East)*
www.twinhead.com

Twinhead Corporation
1537 Centre Pointe Drive, Milpitas, CA 95035
Tel: 408.945.0808 Fax: 408.945.1080

Circle 240 on reader service card

©1996 Twinhead Corporation. All rights reserved. All pricing and specifications subject to change without notice. Twinhead, the Twinhead logo and Slimnote are registered trademarks of Twinhead Corporation. Intel, Pentium and the Intel Inside logo are registered trademarks of Intel Corporation. All other trademarks acknowledged. Warranty terms and conditions are available from Twinhead; call for details.

WORKGROUP PRINTERS

All-Star Lasers

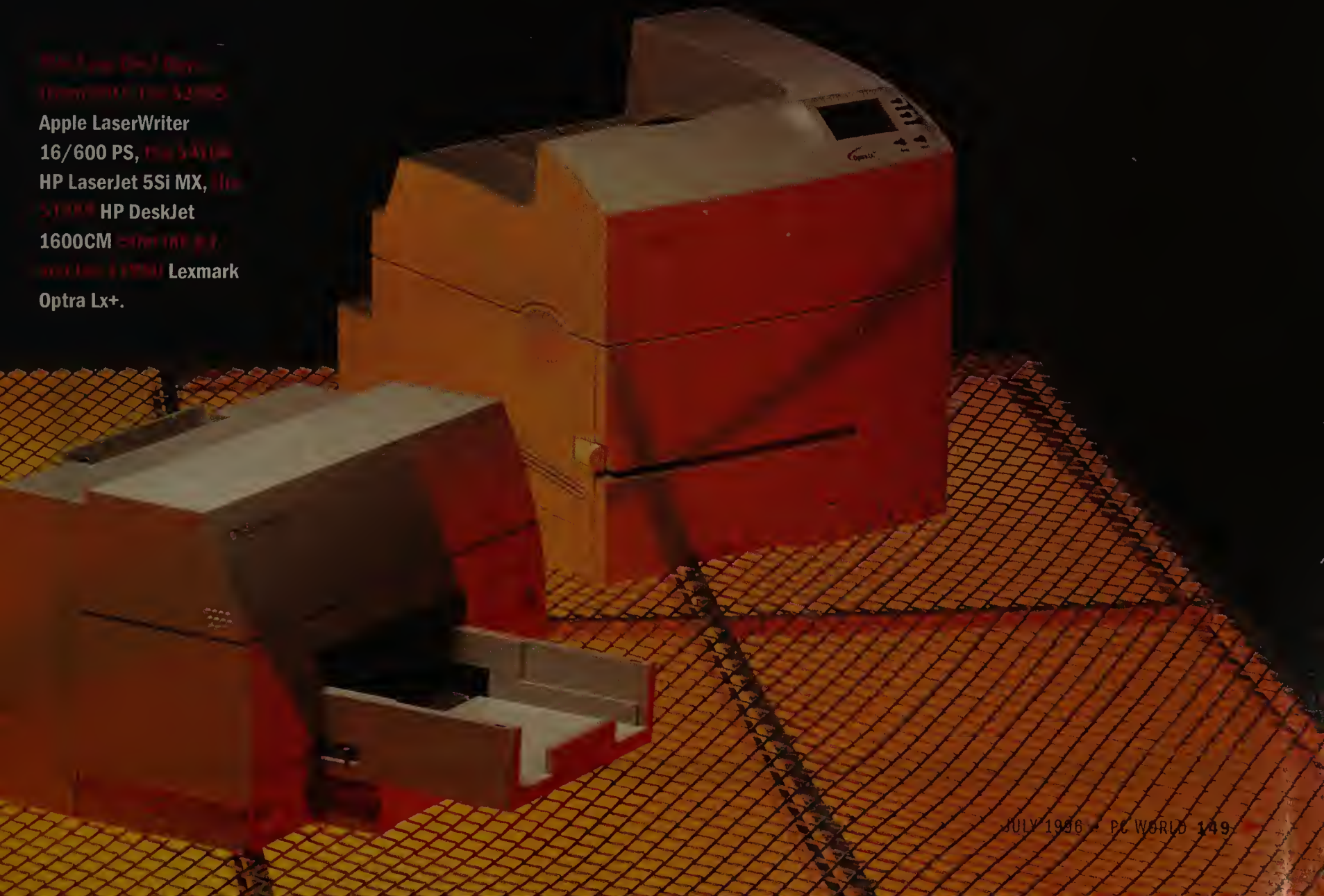
Need a heavy-hitting printer for your workgroup or department? Here's the winning lineup: PC World's Top 10 workgroup printers and Top 3 network printers. By Bill Underwood and Melissa Riofrio

Besides your PC, the piece of office equipment you rely on most is the printer, that unsung hero that sits in the back room faithfully churning out hundreds of pages day after day. Almost any monochrome laser printer you can buy today will do a nice job of printing common business documents. If you're tired of printing charts in crosshatch and gray scale, you can add a good color printer to your office for a few thousand dollars more. But among the many models available, there are discernible differences in print quality, speed, and ease of setup and use.

Introducing the Network Top 3

Every other month we list the 10 best printers for small offices in our *Top 10 Workgroup Printers* review. We look at the latest monochrome and color office models ranging in speed from 8 to 16 pages per minute, with features designed to serve the needs of about 6 to 15 users. This month we introduce a couple of important changes. First, we've updated our test suite to Windows 95 applications. Second, we've expanded our coverage to include higher-end printers for larger offices. Our new *Top 3 Network Printers* review ranks monochrome lasers rated at 17 to 25 ppm and designed to serve up to 30 people. They come with built-in network connections and have a much larger paper capacity.

Our test suite of word processing and spreadsheet documents, presentations, and graphics reflects what most businesses print today. To test the network printers, we added a batch printing test to simulate a large number of documents being sent to the printer concurrently



[illegible] Apple LaserWriter 16/600 PS, [illegible] HP LaserJet 5Si MX, [illegible] HP DeskJet 1600CM [illegible] Lexmark Optra Lx+.

over a network. Because of all the changes to the test suite and the review procedures, the ratings on previous Top 10 charts cannot be compared to the ratings on the new Top 10 chart.

We tested 21 printers in all, including 9 monochrome and 6 color workgroup models, and 6 monochrome network machines. Four Best Buys went to the printers with the best combination of print quality, speed, price, and design.

Tired of printing bar charts in gray scale? Add a good color printer to your office for $1999 and up.

Lexmark, HP, and Apple Take Best Buys

For the text and spreadsheets you print every day, Lexmark's $1950 Optra Lx+ is the top monochrome workgroup printer. Its print quality was superb, and if you buy its tray options, the Lx+ can handle more paper (1300 sheets) than any of its peers in this review.

The best color workgroup printer is Hewlett-Packard's $1999 DeskJet 1600CM. This ink jet beat out five color lasers for a number of reasons: It costs several thousand dollars less, you have to look closely to see that its text is slightly less crisp than a laser's, and its color quality was very good.

Larger offices will appreciate the greater speed and paper handling offered by our two network winners, Apple's $2065 LaserWriter 16/600 PS and HP's $4164 LaserJet 5Si MX. The Apple is one of the least expensive network contenders and had stellar print quality. The HP LaserJet 5Si MX offers greater paper handling and was much faster. However, it costs twice as much.

We tested but did not rank Digital's new Colorwriter LSR 2000 color laser. Its $13,000 price notwithstanding, it had a problem with Word 95, one of our test applications, that slowed its speed significantly and made it print ugly-looking text.

Three network printers weren't ready for review: Lexmark's 24-ppm Optra N should be out by the time you read this. Olympus Image Systems was unable to send us its 24-ppm laser, the PagePlex 24. We tried to test its sibling, the 18-ppm PagePlex 18, but its Windows 3.1 driver didn't work with our test suite. We'll try again when it has Windows 95 drivers. Look for these machines in the January issue's *Top 3 Network Printers* review.

Bill Underwood has tested printers for 16 years. Melissa Riofrio is an associate editor for PC World. *Testing performed by Dave Casini and Ulrike Diehlmann of the PC World Test Center. Support by Andrew Hawn and Julian Weatherby of the PC World Test Center.*

For more information about all products in this article, circle reader service no. 908.

TOP 10 WORKGROUP PRINTERS

		Last ranking	First reviewed	Type	Street price	Overall rating	Print quality: Monochrome	Print quality: Color	Speed: Monochrome	Speed: Color	Features, ease-of-use rating	Reader service number	Comments
MONOCHROME	1 Lexmark Optra Lx+ 800/891-0331	3	Mar 96	laser	$1950	91	92	–	86	–	94	642	Great print quality; control panel is very easy to use.
MONOCHROME	2 HP LaserJet 5M 800/752-0900	–	current	laser	$1799	90	88	–	91	–	86	643	Fastest speed; ethernet and LocalTalk standard.
MONOCHROME	3 Lexmark Optra R+ 800/891-0331	1	Mar 96	laser	$1450	89	92	–	84	–	87	644	Entry-level Optra has less RAM and input capacity than Lx+.
MONOCHROME	4 Okidata OL1200/PS 800/654-3282	–	current	LED	$1563	81	88	–	88	–	85	645	Good price for PostScript printer with 6MB of RAM.
MONOCHROME	5 TI microLaser PowerPro/12 800/848-3927	2	May 96	laser	$1439	80	88	–	90	–	74	646	Very fast, inexpensive; only 500-sheet capacity.
MONOCHROME	6 TI microLaser Pro/8 800/848-3927	–	May 96	laser	$1169	79	88	–	85	–	74	647	Least expensive; takes just 500 sheets, a bit slow.
MONOCHROME	7 HP LaserJet 4MV 800/752-0900	7	Jan 96	laser	$2916	78	85	–	86	–	89	648	Network ready, 16 ppm, prints full-bleed 11 x 17.
COLOR	1 HP DeskJet 1600CM 800/752-0900	1	Nov 95	ink jet	$1999	91	85	90	71	90	88	649	Very good print quality for low price; has ethernet.
COLOR	2 Tektronix Phaser 550 800/835-6100	–	May 96	laser	$5945	84	93	90	77	90	89	650	All-around fastest color laser with great print quality.
COLOR	3 Lexmark Optra C 800/891-0331	3	Mar 96	laser	$6400	84	91	90	73	90	90	651	Expensive, but has great print quality and good speed.

BEST BUY

Methodology Workgroup printers have rated engine speeds of 8 to 16 pages per minute. The overall rating includes ratings for print quality (27 percent), price (20 percent), features and ease of use (20 percent), speed (15 percent), service and support (13 percent), and consumables (5 percent). For all ratings, higher is better. Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

For more information about all products in this table, circle reader service no. 905.

The only time

it slows down is to take important calls.

A speakerphone. A voice-mail system. A fax machine.

Combine them all with a fast, reliable U.S. Robotics modem, and you have a communication device which borders on the frightening.

The Sportster® Voice 28.8/33.6 Kbps Faxmodem gives you everything you need to access the information you want, when you want it.

Retrieve fax and voice messages remotely. Provide multiple-box voice mail. Create an extensive fax-on-demand menu. And, of course, access online services with remarkable speed.

Plus, unlike other modems, the Sportster Voice gives you the proven compatibility and reliability of Sportster, the number one selling modem in the world. It's easy to install and it's Microsoft Plug and Play certified.

What's more, the exclusive *Connections* CD-ROM offers you a wide selection of online products for both home and office.

To learn more about the Sportster Voice, or any of the other ways U.S. Robotics takes the limits off how fast you can get what you want, call us at 1-800-DIAL USR, or visit us at www.usr.com.

USRobotics®

NO LIMITS

U.S. Robotics, the USRobotics logo and Sportster are registered trademarks of U.S. Robotics. All other product names are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies. Product specifications subject to change without notice. Contact your U.S. Robotics representative for current product information.

OTHER PCs CAN RUN WINDOWS 95. BUT PC MAGAZINE SAYS DELL DOES IT BEST.

200MHz PENTIUM® PRO PROCESSOR
DELL DIMENSION™ XPS Pro200n

- Mini Tower Model
- 32MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- NEW Imagine 128 Series 2 Graphics Accelerator with 4MB VRAM
- 8X EIDE CD-ROM Drive
- MS® Office Professional with Bookshelf for Windows® 95 (N.F.I.)
- Microsoft® Windows NT™/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty†
- ★ *Upgrade to 64MB of EDO memory, add $699.*
- ★ *Upgrade to 1 Year of Windows NT software support, add $149.*
- ★ *Upgrade to 2GB SCSI hard drive, add $375.*

$3649
Business Lease◊: $131/Mo.
Order Code #500274

200MHz PENTIUM PRO PROCESSOR
DELL DIMENSION XPS Pro200n

- Mini Tower Model
- 16MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of EDO memory, add $299.*
- ★ *Upgrade to 3 Years of On-site^Δ Service, add $99.*
- ★ *Upgrade to the Imagine 128 Series 2 with 4MB VRAM, add $329.*

$2799
Business Lease: $104/Mo.
Order Code #500273

[illegible]

- Mini Tower Model
- 32MB SDRAM Memory
- 512KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- 28.8 Data/Fax Modem
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *1.6GB/3.2GB Travan Tape Back-up, add $249.*

$3449
Business Lease: $128/Mo.
Order Code #500272

[illegible]

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of SDRAM memory, add $299*

PICTURED SYSTEM

$2499
Business Lease: $92/Mo.
Order Code #500271

166MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P166

- Mini Tower Model
- 32MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

$2799
Business Lease: $104/Mo.
Order Code #500270

133MHz PENTIUM PROCESSOR
DELL DIMENSION [illegible]

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 15LS Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 512KB Pipeline Burst Cache, add $49.*

$2199
Business Lease: $81/Mo.
Order Code #500269

133MHz PENTIUM PROCESSOR
DELL DIMENSION P133t

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15LS Monitor (13.7" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *3Com® EtherLink® Interface Combo Card, add $99.*
- ★ *28.8 Data/Fax Modem, add $129.*
- ★ *ACS-31 Speakers and AWE32 Sound Card, add $219.*

$1799
Business Lease: $67/Mo.
Order Code #500268

[illegible]

- Mini Tower Model
- 8MB EDO Memory
- 256KB Pipeline Burst Cache
- 850MB Hard Drive [12ms]
- 14XE Monitor (13.19" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 16MB of EDO memory, add $99.*
- ★ *Upgrade to a 1.6GB hard drive, add $90.*

$1449
Business Lease: $54/Mo.
Order Code #500267

NEW STANDARD 3 YEAR LIMITED WARRANTY WITH ALL DELL DIMENSION SYSTEMS.

‡Pricing is not discountable. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite D, Austin, TX 7B75B. ◊Business leasing arranged by Leasing Group, Inc. *System weight with floppy drive in options bay. ΔOn-site service provided by BancTec Service Corporation. On-site service may not be available in certain remote locations. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo are registered trademarks and Windows NT is a trademark of Microsoft Corporation. XJACK is a registered trademark of US Robotics Mobile Communications Corporation. 3Com and EtherLink are registered trademarks of 3Com Corporation. ©1996 Dell Computer Corporation. All rights reserved.

PC MAGAZINE EDITORS' CHOICE™
December 5, 1995
Dell Dimension P100t

PC MAGAZINE EDITORS' CHOICE™
December 5, 1995
Dell Dimension XPS P133c

[illegible] PENTIUM PROCESSOR
[illegible]

- NEW Network-ready Notebook
- 11.3" SVGA Active Matrix Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty†

★ *Dell Latitude DeskDock™ station with Advanced Port Replicator, add $229.*

PICTURED SYSTEM

$3899‡
Business Lease: $140/Mo.
Order Code #800047

133MHz PENTIUM PROCESSOR
DELL LATITUDE LM P133ST

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds*
- Extendable 1 Year Warranty

★ *Upgrade to a 1.3GB hard drive, add $400.*
★ *2nd Lithium Ion Battery, add $249.*

PICTURED SYSTEM

$3499‡
Business Lease: $129/Mo.
Order Code #800051

[illegible] PENTIUM PROCESSOR
[illegible]

- NEW Network-ready Notebook
- 10.4" SVGA Dual Scan Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to a 1.2GB hard drive, add $400.*

$2699‡
Business Lease: $100/Mo.
Order Code #800053

100MHz PENTIUM PROCESSOR
DELL LATITUDE LM P100SD

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to 16MB of RAM, add $299.*

$2799‡
Business Lease: $104/Mo.
Order Code #800049

If you're impressed by Windows 95, you should see it running on the Dell Dimension XPS P133c and the Dell Dimension P100t. These Dell® systems were judged the best for running Windows 95 by *PC Magazine*.

The experts reviewed 83 different desktops – both high-end (120 and 133MHz) and mid-range (90 and 100MHz)–and the Dell systems swept both categories. In fact, they praised the Dell desktops, calling them "shining examples of what this award is all about."

The way these systems run Windows 95 is impressive. But the way these systems are priced is even more so.

To order, give us a call today.

DIRECT NEWS ON THE INTERNET
For free updates on Dell's product offerings, pricing and other news electronically, send an email message to "DirectNews-request@dell.com." Please use the word "subscribe" as the body of your message.

DELL®

TO ORDER
800-626-8304
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada, call 800-232-6978

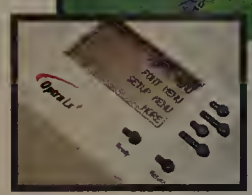
Keycode #03150

Monochrome Workgroup Printers

1 Lexmark Optra Lx+

PROS: Very easy to use, can handle more paper than competitors

CONS: Second most expensive printer on the chart, ties for highest estimated cost per page



Easier Labeling: The LCD panel on the Optra tells you the current function for the button next to it.

The Best Buy Optra Lx+'s superb print quality and ease of use overshadowed its high $1950 price and mediocre speed. Both of the 16-ppm Optra lasers we review (the Optra R+ is the other) share excellent manuals and intuitive front control panels rivaled only by the one in HP's second-ranking LaserJet 5M. An LCD panel changes the labels as you navigate the Optras' many functions—much easier than deciphering the cryptic, abbreviated labels on other printers' control panels.

Both Optras printed excellent gray-scale images as well as text and line art. The Optras can also print true 1200 dpi if you upgrade their standard RAM.

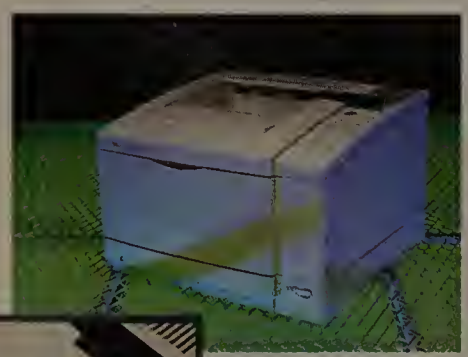
Under our Windows 3.1 test suite, the Lx+ was one of the fastest 16-ppm printers we'd reviewed, but with our new Windows 95 test suite, it was just middle of the pack. In particular, both Optras processed our gray-scale image slowly. It's possible that Lexmark hasn't worked all the kinks out of the Optras' new Windows 95 drivers.

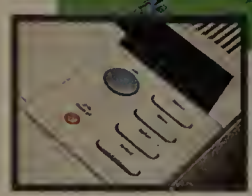
The Optras' estimated cost per page, 2.8 cents, is the highest we've seen for a monochrome. That's our biggest reservation about a strong printer that well deserves its Best Buy.

2 HP LaserJet 5M

PROS: Fastest monochrome laser we've tested, revamped design is easier to use

CONS: Print quality and paper capacity aren't quite as good as that of the Lexmarks





Just Say Go: The new LaserJet 5M's control panel has buttons simply labeled "Stop" and "Go" to control printing traffic.

HP's $1799 LaserJet 5M is a less expensive, well-designed replacement for the 4M Plus. It's also the first printer to incorporate PCL 6, HP's latest version of its standard-setting page description language. According to the vendor, PCL 6 has been optimized for speed and print quality. Our tests seemed to bear this out: The 12-ppm LaserJet 5M turned in the fastest overall performance of any workgroup printer, particularly when printing graphics files like our full-page photograph. (The unit's 6MB of RAM probably helped.) The 5M's print quality was very good, too.

The LaserJet 5M's sleek design echoes the graceful, curved covers of the Optra printers. Its control panel takes after the traditional HP layout, but two new buttons simplify common tasks. The single Go button's prominent size and green color make it clear: This is what you press to continue printing after changing the toner or clearing a paper jam. There's a smaller Job Cancel button to immediately stop the job in progress.

What the LaserJet 5M lacks compared to the Optras is paper capacity: Its maximum is 750 sheets, compared to 1000 on the Optra R+ and 1300 on the Lx+. On the other hand, the 5M's $1799 price includes ethernet and LocalTalk network connections—more than the Optras offer. Network ready out of the box, with top-notch speed and print quality, the LaserJet 5M earns a solid second place on the chart.

3 Lexmark Optra R+

PROS: Excellent print quality, dynamic labeling on control panel is easy to understand

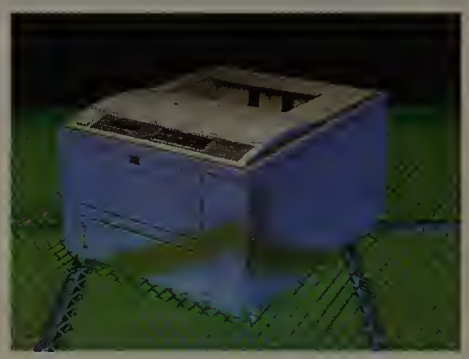
CONS: Slowest workgroup contender when printing gray-scale images

Our number three printer this month is the $1450 Optra R+. It's a less expensive but less expandable alternative to its Best Buy sibling, with just a 200-sheet paper cassette in its standard setup. Otherwise, the R+ is the same 16-ppm printer as the Lx+. Its performance was slightly slower than the Lx+'s, but the two machines' print quality was virtually indistinguishable—simply excellent on all counts.

4 Okidata OL1200/PS

PROS: Comes with PostScript and LocalTalk in its standard configuration

CONS: Front control panel is not as easy to use as those on the Optras and the HP LaserJet 5M



The Okidata OL1200/PS is an inexpensive 12-ppm LED (a technology similar to laser) printer that gets the job done. It just lacks the nifty control panels and better-designed drivers that make the Lexmark Optras and the HP LaserJet 5M much easier to use. At a low street price of $1563, it's a solid midrange performer too. The Okidata's text, gray-scale images, and line art are every bit as good as those of most printers we review this month, although the machine can't match the superb Lexmarks.

The Okidata comes with 6MB of RAM, which probably contributed to its speed. Other pluses in its configuration include a 500-sheet standard paper cassette and a maximum capacity of 1100 sheets. A LocalTalk network interface comes standard, but others, like ethernet, will cost you. If the slick features of the HP and Lexmark printers don't sway you, this is a well-priced option that's ready for Mac environments.

NEW
WINDOWS 95
Version Now Available!

MAKES ALL RETYPING OBSOLETE.

OMNIPAGE PRO: THE WORLD'S MOST ACCURATE OCR.

Step one: Scan a document. Step two: Press a button to convert that document into editable text and images for your favorite applications.

WHAT'S NEW IN OMNIPAGE PRO FOR WINDOWS 95

- Microsoft Office Compatible
- Integrates with your favorite image editor
- New easier-to-use AutoOCR Toolbar™
- Read faxes directly from Microsoft Exchange
- Automatic OCR scheduling
- HTML output jump starts moving pages to the Web
- OLE 2.0 support, and more

Designed for Microsoft Windows 95

Sound easy? It is. OmniPage® Pro is the world's most accurate Optical Character Recognition (OCR) software, turning your scanned pages into usable, editable text and graphics in seconds.

So now you can accurately enter your letters, faxes, reports, even articles into Word, WordPerfect, Excel, Lotus 1-2-3, PageMaker and many other applications without ever having to type a single word. OmniPage Pro is now available for Windows 95 and Windows 3.1. Which means that—no matter which operating system you use—you can take complete advantage of the most accurate OCR software in the world today.

> "OmniPage Pro is the longtime OCR leader for good reason. It's simple, fast and the most complete package around."
>
> *PC Computing—December 1995*

Call us now to order a copy of OmniPage Pro, or simply visit a local reseller. And then you can really start using your scanner for all it's worth.

caere®

SPECIAL UPGRADE

$129*

If you have any OmniPage or WordScan product, including those bundled with your HP or other scanner, upgrade to OmniPage Pro for these benefits:

- 65% more accurate
- 35% faster
- New, easier-to-use interface
- True Page® retains text & graphics in their original layout

74% off regular price

Visit a local reseller or call today!

800-736-5735

extension 60

[www.caere.com]

*Suggested price US dollars—subject to change without notice. Caere, the Caere logo, OmniPage, WordScan and True Page are registered trademarks and AutoOCR Toolbar is a trademark of Caere Corporation. All other names are the property of their respective holders. © 1996.

Circle 91 on reader service card

HOW TO BUILD YOUR OWN COMPUTER WITH ONE HAND.

200MHz PENTIUM® PRO PROCESSOR
DELL DIMENSION™ XPS Pro200n

- Mini Tower Model
- 32MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- NEW Imagine 128 Series 2 Graphics Accelerator with 4MB VRAM
- 8X EIDE CD-ROM Drive
- MS® Office Professional with Bookshelf for Windows® 95 (N.F.I.)
- Microsoft® Windows NT™/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty†
- ★ *Upgrade to 64MB of EDO memory, add $699.*
- ★ *Upgrade to 1 Year of Windows NT software support, add $149.*
- ★ *Upgrade to 2GB SCSI hard drive, add $375.*

$3649

Business Lease◊: $131/Mo.
Order Code #500274

200MHz PENTIUM PRO PROCESSOR
DELL DIMENSION XPS Pro200n

- Mini Tower Model
- 16MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of EDO memory, add $299.*
- ★ *Upgrade to 3 Years of On-site^Δ Service, add $99.*
- ★ *Upgrade to the Imagine 128 Series 2 with 4MB VRAM, add $329.*

$2799

Business Lease: $104/Mo.
Order Code #500273

200MHz PENTIUM PROCESSOR
NEW DELL DIMENSION XPS P200s

- Mini Tower Model
- 32MB SDRAM Memory
- 512KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- 28.8 Data/Fax Modem
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *1.6GB/3.2GB Travan Tape Back-up, add $249.*

$3449

Business Lease: $128/Mo.
Order Code #500272

200MHz PENTIUM PROCESSOR
NEW [illegible]

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 32MB of SDRAM memory, add $299*

PICTURED SYSTEM

$2499

Business Lease: $92/Mo.
Order Code #500271

166MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P166s

- Mini Tower Model
- 32MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

$2799

Business Lease: $104/Mo.
Order Code #500270

133MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P133c

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 15LS Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 512KB Pipeline Burst Cache, add $49.*

$2199

Business Lease: $81/Mo.
Order Code #500269

133MHz PENTIUM PROCESSOR
DELL DIMENSION P133t

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15LS Monitor (13.7" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *3Com® EtherLink® Interface Combo Card, add $99.*
- ★ *28.8 Data/Fax Modem, add $129.*
- ★ *ACS-31 Speakers and AWE32 Sound Card, add $219.*

$1799

Business Lease: $67/Mo.
Order Code #500268

100MHz PENTIUM PROCESSOR
DELL DIMENSION P[illegible]

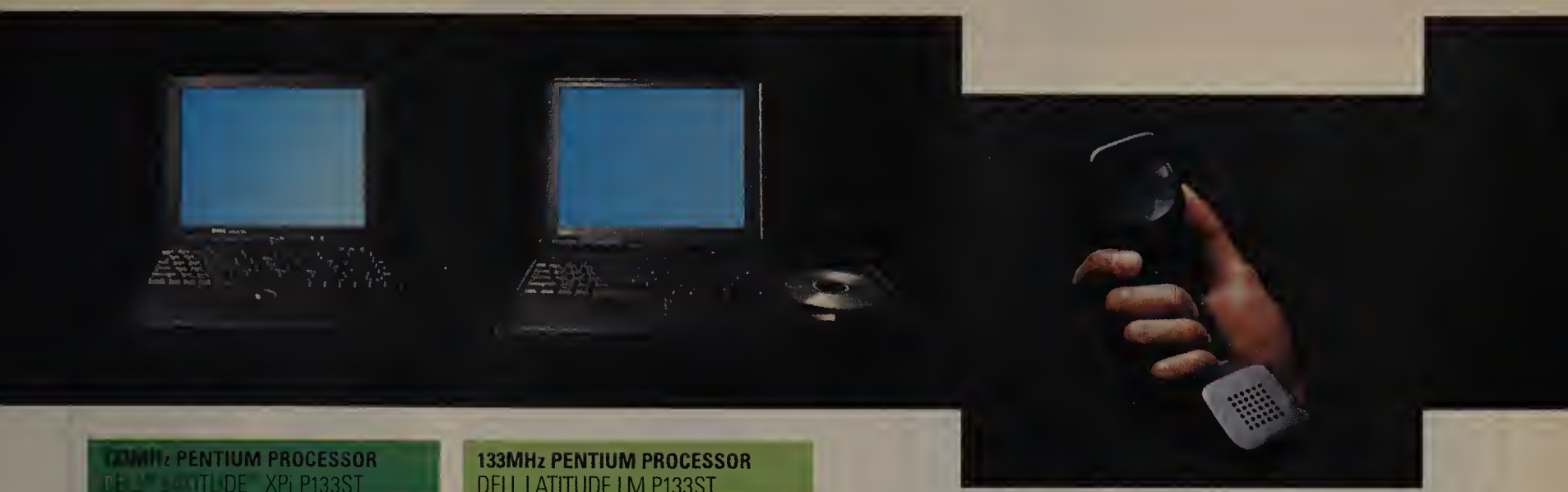
- Mini Tower Model
- 8MB EDO Memory
- 256KB Pipeline Burst Cache
- 850MB Hard Drive [12ms]
- 14XE Monitor (13.19" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty
- ★ *Upgrade to 16MB of EDO memory, add $99.*
- ★ *Upgrade to a 1.6GB hard drive, add $90.*

$1449

Business Lease: $54/Mo.
Order Code #500267

NEW STANDARD 3 YEAR LIMITED WARRANTY WITH ALL DELL DIMENSION SYSTEMS.

‡Pricing is not discountable. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite D, Austin, TX 78758. ◊Business leasing arranged by Leasing Group, Inc. *System weight with floppy drive in options bay. ΔOn-site service provided by BancTec Service Corporation. On-site service may not be available in certain remote locations. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo are registered trademarks and Windows NT is a trademark of Microsoft Corporation. XJACK is a registered trademark of US Robotics Mobile Communications Corporation. 3Com and EtherLink are registered trademarks of 3Com Corporation. ©1996 Dell Computer Corporation. All rights reserved.



133MHz PENTIUM PROCESSOR
DELL LATITUDE XPi P133ST

- NEW Network-ready Notebook
- 11.3" SVGA Active Matrix Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty†

★ *Dell Latitude DeskDock™ station with Advanced Port Replicator, add $229.*

PICTURED SYSTEM

$3899‡
Business Lease: $140/Mo.
Order Code #800047

133MHz PENTIUM PROCESSOR
DELL LATITUDE LM P133ST

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds*
- Extendable 1 Year Warranty

★ *Upgrade to a 1.3GB hard drive, add $400.*
★ *2nd Lithium Ion Battery, add $249.*

PICTURED SYSTEM

$3499‡
Business Lease: $129/Mo.
Order Code #800051

100MHz PENTIUM PROCESSOR
DELL LATITUDE XPi P100SD

- NEW Network-ready Notebook
- 10.4" SVGA Dual Scan Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to a 1.2GB hard drive, add $400.*

$2699‡
Business Lease: $100/Mo.
Order Code #800053

100MHz PENTIUM PROCESSOR
DELL LATITUDE LM P100SD

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to 16MB of RAM, add $299.*

$2799‡
Business Lease: $104/Mo.
Order Code #800049

It's not as hard as you think. Just pick up the phone, and we'll help you put together precisely the computer you're looking for. Do you want a notebook or a desktop? How fast? How big a hard drive? How much memory? What kind of monitor? Will that be with bells or whistles or both? Why are we so accommodating? Because we don't just sell computers. We custom-build them.

One by one. To your specifications. Because we are the manufacturer, we have no restrictions on the variety of machines we can offer. So, unlike many of our competitors, we can give you precisely what you want. And you don't pay for anything you don't need. Sound good? We think so, too. So give us a call. You only have to lift one finger to start building your computer just the way you like it.

DIRECT NEWS ON THE INTERNET
For free updates on Dell's product offerings, pricing and other news electronically, send an email message to "DirectNews-request@dell.com." Please use the word "subscribe" as the body of your message.

DELL®

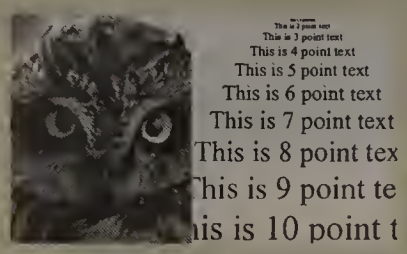
TO ORDER
800-626-8306
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada,* call 800-232-6978

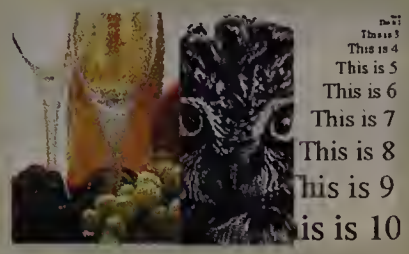
Keycode #03152

Best Buys Have Some of the Best Print Quality

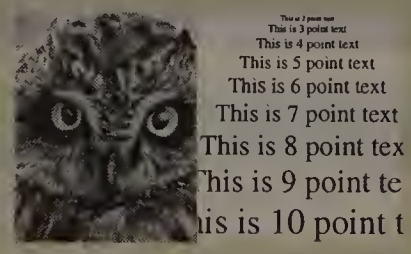
Lexmark Optra Lx+ The Optra Lx+'s print quality was superb in all areas. It produced smooth, realistic transitions between light and dark in our gray-scale image.



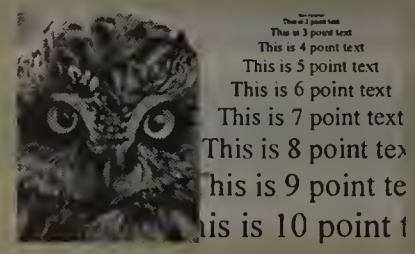
HP DeskJet 1600CM The 1600CM's text printing was nearly as crisp as a monochrome laser's. Its ink jet colors don't saturate like a color laser's, but they still look great.



Apple LaserWriter 16/600 PS The Apple's print quality was excellent across the board. Text here is legible down to 2-point size. The Apple handled tough line art smoothly, too.



HP LaserJet 5Si MX The 5Si MX printed some of the best gray-scale images among the network printers we tested; text and line art were also exemplary.



5 TI microLaser PowerPro/12

PROS: Very fast, good price, PostScript and LocalTalk standard

CONS: Holds only 500 sheets of paper, some banding in gray-scale images

The TI microLaser PowerPro/12 doesn't have the paper capacity of the higher-ranking printers on the monochrome workgroup chart, but for offices that don't print in high volume, it's a good—and, at $1439, economical—choice.

Rated at 12 ppm, the TI is fast. It performed nearly as well as the hotshot HP LaserJet 5M, thanks in part to Adobe Memory Booster, which uses the TI's standard 3MB of RAM very efficiently. Text quality was fine, but the unit's line art and gray scale couldn't quite match the Lexmarks'. In particular, we noticed some banding on gray-scale images.

The TI provides LocalTalk for Macintosh networks, but you'll have to pay $399 for ethernet. The only real smudge on this picture is paper capacity: The PowerPro/12's maximum is a mere 500 sheets, compared to the printers ranking above it, which can take 750 pages or more with additional trays.

6 TI microLaser Pro/8

PROS: Least expensive monochrome workgroup printer on the chart

CONS: Gray-scale images print darkly and show some unsightly banding

If saving a little money is a higher priority than a printer's speed, TI's $1169 microLaser Pro/8 is an inexpensive, midrange performer. It's nearly identical to its sibling, the microLaser PowerPro/12, except for its 8-ppm engine.

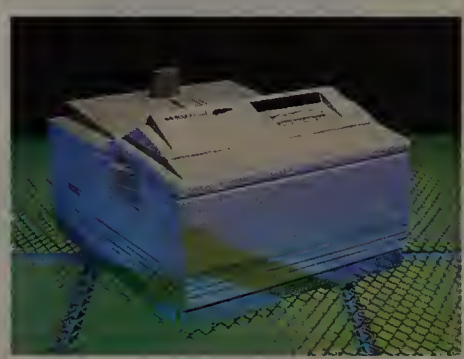
The microLaser Pro/8 could be a good cross-platform printer: It comes with PostScript Level 2 (and prints faster in that mode than in PCL), as well as LocalTalk for printing from Macintosh computers. An ethernet network interface costs an additional $399. Like the other TI microLaser printer we review, the Pro/8 printed good text and line art, but its gray-scale images were mediocre. Photographs we printed looked dark and showed some horizontal banding.

The microLaser Pro/8's low 500-sheet maximum paper capacity is its other drawback. For the price, however—the lowest on the chart—it can serve an office's basic printing needs as well as the Okidata or the TI above it can, albeit more slowly.

7 HP LaserJet 4MV

PROS: Comes with ethernet and LocalTalk, prints full-bleed on tabloid-size paper

CONS: Control panel is less user-friendly compared to newer designs



HP's LaserJet 4MV loses some points for its print quality and especially for its high $2916 price. But it offers some high-end features as well. It's one of the better-equipped models we've seen, as it includes both ethernet and LocalTalk network connections in its standard configuration. Its 750-sheet maximum paper capacity is better than that of the two TI printers that rank above it. And the 4MV is the only monochrome workgroup contender we've reviewed that can print full-bleed on 11-by-17-inch tabloid paper.

The LaserJet 4MV printed basic text documents ably. But it couldn't handle gray-scale images as well as higher-ranked contenders could. Our photographs looked dark printing from the 4MV. While the image didn't show banding, it didn't show a wide range from light to dark either.

Although the 4MV has been a steady chart contender for many months, the printer is showing its age. Despite the 4MV's 16-ppm engine, the new 12-ppm LaserJet 5M is faster. The 4MV's button-heavy front control panel is not as intuitive as its new sibling's, either. So what do you get for the price? A solidly built printer with decent speed and paper capacity that's also network ready, a distinctive trait for a workgroup contender.

The Vision

EYE CONTACT

AUSTIN BUILDS CONFIDENCE

Austin's Global Reach: The World According to IPC.

Austin is a division of IPC Technologies. When you call Austin, you're tapping into the many benefits of a diversified global organization with interests in notebook PCs, desktop systems, and departmental servers. As your company's needs expand and evolve, you can rely on Austin's global perspective and 14 years of experience to deliver an integrated computing solution.

Take a Closer Look

Austin projects eye-catching confidence with a comprehensive product line that includes **high-capacity notebooks, reliable desktop systems**, and **expandable departmental servers**. We invite closer scrutiny, because all Austin systems are configured for performance and priced for value. And each machine is backed by superior service and support. **Make contact with Austin.**

Our Mission: Absolute Customer Satisfaction

Quality is our watchword, and our mission is absolute customer satisfaction. We're certain that our personal attention and higher level of craftsmanship will make the difference for you. Austin is proven in the PC industry — we've won the **5-Star Service Award** from *PC Computing* and the **Industry Information Technology Award** from *Government Computer News*. Call now and put Austin's commitment to work for you. ***Seeing is Believing.***

PC Computing

Austin's Family of Products

- *Austin Edge™ Series Notebook Systems: Includes Intel®'s 430MX™ PCI Set and support for internal CD-ROM*
- *Austin PowerPLUS™ Desktop Systems: Our profile for success features Pentium® and Pentium Pro technology and custom configuration options*
- *Austin Affinity™ Departmental Servers: Quad Pentium Pro processors with 12 hot-swap drive bays and enhanced cooling for greater reliability*

AUSTIN™
A Division of IPC Technologies, Inc.
Driven to Perfection!

TO ORDER CALL:
800-331-1501

2121 Energy Drive, Austin, Texas 78758
512-339-3500 • FAX 512-454-1357
GSA# GS00K94AGS5201
http://www.austindirect.com

Government Sales:	800-833-4472
Fortune 1000 Sales:	800-622-5506
Canadian Sales:	800-338-1565
International Sales:	512-339-3547

Ad Code:
1501

Notebook Solutions

VISUAL ACUITY

AN EYE ON THE BOTTOM LINE

Austin Edge CD Notebook Standard Features:

Intel 430MX PCI Set

Internal 3.5" Removable Diskette Drive, (Swappable w/ 2nd Battery or 6X CD-ROM)

32-Bit Local Bus Fast IDE

256K Pipeline Burst L2 Cache

16-Bit Stereo Business Audio

Built-in Microphone, Speakers & External Jacks for Line-In/Line-Out

Lithium-Ion Battery

Glide Point® Mouse

Weight with Battery: 6.8 lbs.

Win '95 Plug n' Play BIOS

Windows® 95 Pre-Installed

Austin Edge XP Notebook Standard Features:

Intel 430MX PCI Set

16-Bit Stereo Business Audio

Built-in Microphone, Speakers & External Jacks for Line-In/Line-Out

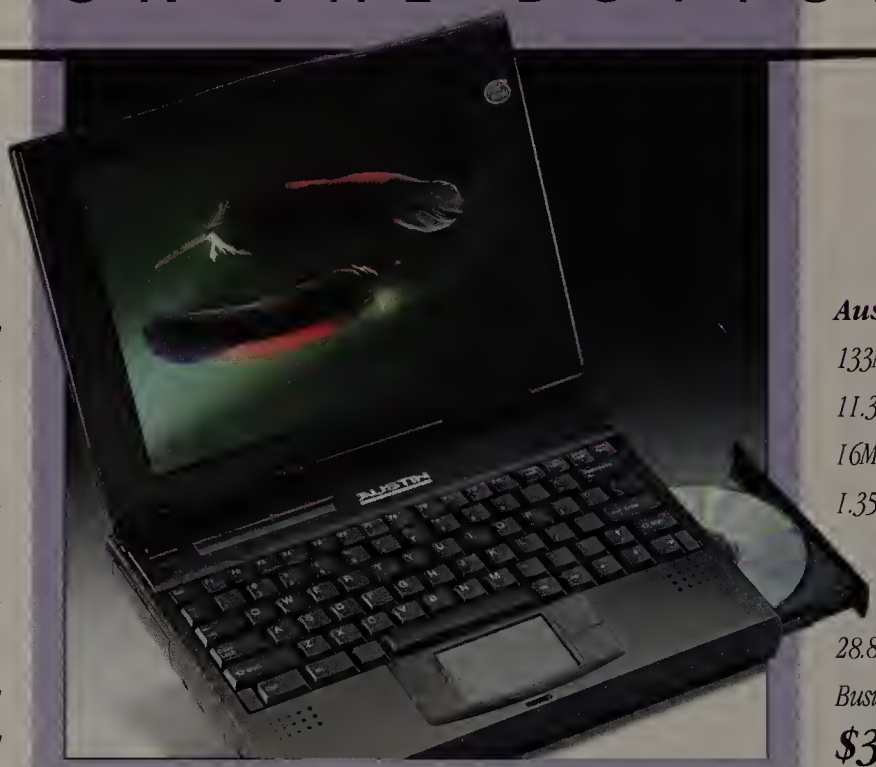
NiMH Battery (Second Battery Optional)

Integrated Pointing Stick Mouse

Weight with Battery: 5.5 lbs.

Win '95 Plug n' Play BIOS

Windows 95 Pre-Installed

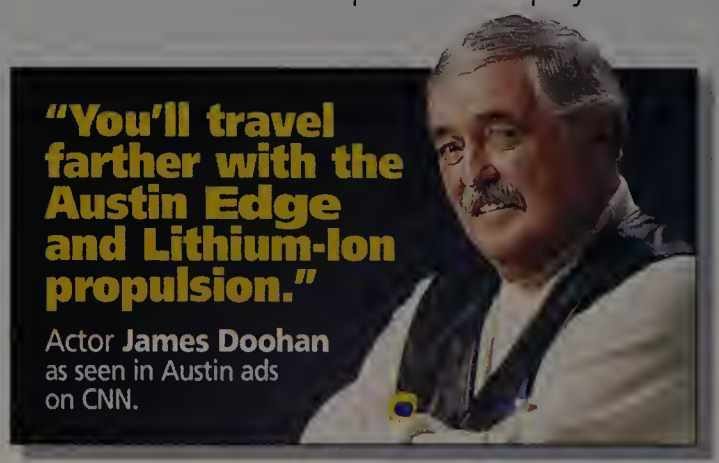


Instinct for Action

Cut your response time and react with confidence, knowing that Austin's enhanced ***Edge* notebook computers** back you up with **133MHz Pentium** power and **16MB of RAM**. Display a crisp, **11.3" screen image** and rely on the **6X CD-ROM** to deliver top multimedia performance. **Lithium-Ion batteries** ensure extended battery life, and the **810MB hard drive** capacity manages your data effectively.

Jump on the Opportunity

For even greater flexibility, ask about the ***Edge* Duet**. It weighs just 4.7 pounds and slides into a docking station (only 6.8 pounds total) to transform into a complete desktop system.



Austin Edge CD-133

133MHz Intel Pentium Processor

11.3" TFT 800 x 600 Color Display

16MB EDO RAM (expandable to 40MB)

1.35GB Hard Drive

32-Bit PCI Video – 2MB

6X Internal CD-ROM

28.8 Fax/Modem

Business Lease: ***$138 / month***

$3,999

OPEN HERE

Austin Edge XP-100

100MHz Intel Pentium Processor

10.4" TFT 800 x 600 Color Display

16MB EDO RAM (expandable to 24MB)

810MB Hard Drive (Fast IDE Interface)

32-Bit PCI Video – 1MB

Internal 3.5" Diskette Drive (Removable for optional second battery)

Business Lease: ***$92 / month***

$2,469

intel inside pentium® PROCESSOR

AUSTIN™
A Division of IPC Technologies, Inc.
Driven to Perfection!

TO ORDER CALL:
800-331-1501

2121 Energy Drive, Austin, Texas 78758
512-339-3500 • FAX 512-454-1357
GSA# GS00K94AGS5201
http://www.austindirect.com

Government Sales:	800-833-4472
Fortune 1000 Sales:	800-622-5506
Canadian Sales:	800-338-1565
International Sales:	512-339-3547

Model 76i
shown with optional 7 watt dome speakers.

Performance. Art.

Introducing Studioworks, the new generation of computer displays from

Studioworks

GoldStar. On the performance side, Studioworks delivers a clearer, sharper image and more accurate color, edge to edge. Plug and play compatibility with Windows® 95 sets optimal image characteristics automatically*. A compact design fits more screen into less space. And new digital on-screen controls make precise, custom adjustment simpler. For the artist in you, Studioworks displays the fine details and the subtle tones and textures, to give your vision that added brilliance. The new Studioworks series from GoldStar. They're more than monitors, they're masterpieces. Ask for them at your local computer retailer.

S T U D I O W O R K S

MODEL	SCREEN	PITCH	MAX. FLICKER-FREE RESOLUTION
20i	20" FST (18.76" VIS)	.28mm dot	1280x1024 @ 76 Hz NI
78i	17" FST (15.7" VIS)	.26mm dot	1280x1024 @ 76 Hz NI
76i	17" FST (15.7" VIS)	.28mm dot	1024x768 @ 80 Hz NI
56i	15" FST (13.6" VIS)	.28mm dot	1024x768 @ 80 Hz NI
56m†	15" FST (13.6" VIS)	.28mm dot	1024x768 @ 80 Hz NI

† Built-in stereo amplifier and speakers. * Requires DDC compatible video card
Microsoft and Windows 95 are registered trademarks of Microsoft Corporation

Designed for Microsoft Windows 95

GoldStar
LG Electronics

LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632 (201) 816-2000

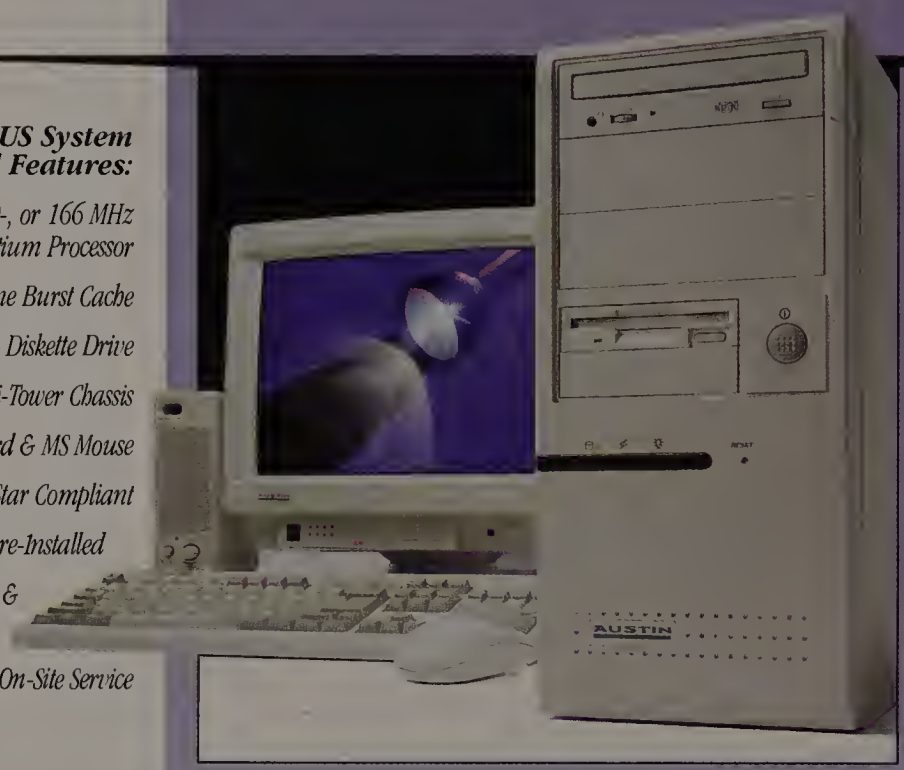
3 YEAR LIMITED WARRANTY

Circle 96 on reader service card

Desktop Solutions

20/20 V

AUSTIN POWER PERFORMERS



Austin PowerPLUS System Standard Features:

100-, 120-, 133-, 150-, or 166 MHz Intel Pentium Processor

256 to 512K L2 Pipeline Burst Cache

3.5" 1.44MB Diskette Drive

Desktop or Mini-Tower Chassis

Win '95 Keyboard & MS Mouse

Energy-Star Compliant

Windows '95 Pre-Installed

Three-Year Parts & Labor Warranty

One-Year On-Site Service

Austin PowerPLUS 100

100MHz Intel Pentium Processor

16MB EDO RAM (expandable to 128MB)

1.2GB Enhanced IDE Hard Drive

64-Bit PCI Video Accelerator – 2MB DRAM

6X IDE CD-ROM Drive, 16-Bit Audio, 40W Stereo Speakers

15" .28mm NI SVGA Monitor

101-Key Keyboard & MS Mouse

Business Lease: ***$69 / month***

$1,899

Upgrade to PowerPLUS 133 - ***add $150***

See the Difference

Call Austin and experience our attention to detail and fast response. Expect **Custom Configuration** and **Quick-Ship** promptness without extra charges. With Austin, we build reliable computers and we stand behind every system we ship.

A Vision of Your Success

Each Austin desktop gives you a selection of innovative features, like the **180MHz Pentium Pro processor** and **64-bit PCI acceleration** with **2MB of VRAM**, as well as an **8X CD-ROM** and **16-bit Audio Card**. Of course, Windows 95 is preinstalled, and optional hard-drive capacity ranges up to 2GB.

Austin Pro Workstation Standard Features:

180- or 200 MHz Intel Pentium Pro Processor

256 to 512K L2 Pipeline Burst Cache

3.5" 1.44MB Diskette Drive

Mid-Tower ATX Chassis

Win '95 Keyboard & MS Mouse

Energy-Star Compliant

Windows '95 Pre-Installed

Three-Year Parts & Labor Warranty

One-Year On-Site Service

Austin Pro Workstation 180

180MHz Intel Pentium Pro Processor

16MB EDO RAM (expandable to 128MB)

2GB Enhanced IDE Hard Drive

64-Bit PCI Video Accelerator – 2MB VRAM

8X IDE CD-ROM Drive, 16-Bit Audio, 40W Stereo Speakers

15" .28mm NI SVGA Monitor

Business Lease: ***$103 / month***

$2,799

Upgrade to Pentium Pro 200 - ***add $200***

Upgrade to Windows NT 3.51 Workstation - ***add $275***

Ad Code: 1501

©1996 IPC Technologies, Inc. All rights reserved. Intel, the Intel Insi
Microsoft and Windows are registered trademarks of Microsoft in the U.S.
or registered trademarks of their respective owners. The above are special pro
Special offers are good for a limited time only. Call for specific de
Screens simulated for advertising purposes. We are n

Business Lease term reflects 36-month contract. Le

Server Solutions

VISION

AUSTIN DEPARTMENTAL SERVERS

Austin Affinity XR Server Standard Features:

256K L2 Cache
Adaptec 2940W Drive Controller
4X SCSI CD-ROM Drive
16-Bit PCI Video
3.5" 1.44MB Diskette Drive
10Base-T PCI Network Adapter
3 ISA, 3 PCI Expansion Slots
Tower Chassis (26"H x 10" W x 25.5"D)
300W Power Supply
101-Key Keyboard
Three-Year Parts & Labor Warranty
One-Year On-Site Service

Austin Affinity XE and XE Pro Standard Features:

512K L2 Cache
Mylex or AMI PCI RAID Controller
4X SCSI CD-ROM Drive
3.5" 1.44MB Diskette Drive
16-Bit PCI Video
100Base-T PCI Network Adapter
Affinity XE: 6 EISA, 4 PCI Expansion Slots
Affinity XE Pro: 4 EISA, 6 PCI Expansion Slots
Tower Chassis (26"H x 10" W x 25.5"D)
500W Power Supply
101-Key Keyboard
Three-Year Parts & Labor Warranty
One-Year On-Site Service
Mylex AMI Array Management Software and Austin's Novell NetWare Management Software Pre-Installed

and Pentium are reg trademarks of Intel Corporation
er countries. All oth pany names and products are trademarks
ai prices. Prices and ations are subject to change without notice
tual configuration sh may vary from products shown
nsible for errors in ty or photography
rranged for Austin MarketPlacement, Inc.

Look to the Future

Your **Austin Affinity** arrives ready for work, designed for easy installation and **mission critical reliability**. Whether you start with a single processor or take advantage of the **first-to-market quad Pentium Pro configuration**, every Affinity is designed to accommodate increasing demands. The top-of-the-line **Affinity XE Pro** offers four EISA and six PCI expansion slots for maximum expandability to manage your network growth.

Site Plan for Success

Austin Affinity. It means a compelling combination of raw processing power and easy-to-manage networking resources. Install up to **12 hot-swappable hard drives**, each with 2GB or 4GB capacity. And simplify network administration with preinstalled Austin **Novell NetWare Management software** and **Array Management software.**

intel inside
PENTIUM PRO PROCESSOR

Austin Affinity XR-120

120MHz Intel Pentium Processor
16MB RAM – Expandable to 256MB
2GB Hot-Swappable Fast & Wide SCA Hard Drive – Expandable to 12GB
Business Lease: ***$138 / month***

$3,995

Austin Affinity XE-150

150MHz Dual Pentium Processor
64MB RAM – Expandable to 512MB
3 2GB Hot-Swappable Fast & Wide SCA Hard Drives – Expandable to 24GB
Business Lease: ***$364 / month***

$10,995

Austin Affinity XE-Pro

200MHz Dual Pentium Pro Processor
128MB RAM – Expandable to 1GB
5-2GB Hot-Swappable Fast & Wide SCA Hard Drives – Expandable to 24GB
Business Lease: ***$665 / month***

$19,995

Maximize Affinity XE reliability with hot-swap redundant power supply upgrade – ***$995***

AUSTIN
A Division of IPC Technologies, Inc.
Driven to Perfection!

TO ORDER CALL:
800-331-1501

2121 Energy Drive, Austin, Texas 78758
512-339-3500 • FAX 512-454-1[illegible]7
GSA# GS00K94AGS5201
http://www.austindirect.com

Government Sales:	800-833-[illegible]72
Fortune 1000 Sales:	800-622-[illegible]06
Canadian Sales:	800-338-[illegible]65
International Sales:	512-339-[illegible]47

Color Workgroup Printers

1 HP DeskJet 1600CM

PROS: Inexpensive; good performance; great print quality for an ink jet

CONS: Unlike with lasers, prints from ink jets are sensitive to moisture and sunlight

The HP DeskJet 1600CM has occupied the top spot on the color workgroup chart since its debut last November for one simple reason: It's an economical, competent alternative to a color laser. The sole ink jet on the charts, it has a $1999 street price that's thousands of dollars less than even the cheapest color laser's, yet it still provides impressive print quality. Its cost per page is also significantly lower than a color laser's. And the DeskJet is a good performer: It earned midrange scores printing monochrome documents, but its speed in color was comparable to those of the two color lasers that rank beneath it.

Ink jet printers can be finicky about the kind of paper you use, and ink jet–printed pages are sensitive to moisture and sunlight. But even on plain paper, the DeskJet's colors are bright; line art is clean; and small text has minimal feathering at the edges. And unlike with most ink jets, you don't have to adjust the software settings to get the best results: The DeskJet's ColorSmart driver prints well using the default settings.

Okay, maybe you're a die-hard laser fan. On the other hand, it's hard to ignore the fact that you can print thousands of great-looking pages on the DeskJet 1600CM before spending as much as you'd pay for a typical color laser. The DeskJet 1600CM wins a Best Buy because it delivers high quality easily, quickly, and cheaply.

2 Tektronix Phaser 550

PROS: Best overall print quality, fast, lowest price for a color laser; unique HTML-based utility lets you check print status with a Web browser

CONS: You must buy Tektronix's expensive proprietary SIMMs for memory upgrades

The Tektronix Phaser 550 earns the number two spot on the color chart for its excellent print quality, its speedy performance, and its low price ($5945) for a laser. Tektronix achieves this in part by installing just 8MB of RAM in the standard model (previous versions of this printer had as much as 36MB). The Phaser 550 also lacks the ethernet and LocalTalk you'll find on most other color contenders reviewed here.

The Phaser 550 had the best print quality among the color lasers we tested, including legible text and sharp line art. Using its capable TekColor driver's default settings, you get effortless, great-looking color. If you like to tweak and fiddle, though, you can play with the driver's many buttons and controls. As with every other color laser, gray-scale quality was not as good as that of the better monochrome lasers.

The Phaser 550 is one of the faster color lasers we've seen. Overall, it was bested only by the HP Color LaserJet 5M, whose native 300-dpi resolution means the HP has an inherent speed advantage over the Phaser 550's native 600-dpi resolution, which requires that four times as many dots be printed.

For offices already equipped with Web browsers for the Internet or an intranet, the Phaser 550's PhaserLink software—the first of its kind—provides a platform-independent, HTML-based utility for viewing or changing print options. It also takes you directly to Tektronix's Web site for downloading the latest driver or getting tips and technical data. The Phaser 550 also can print on labels, something that all the other color lasers we've seen can't handle. A $1695 CopyStation hardware option turns it into a color copier, too—an attractive proposition. Unfortunately, to add RAM to the Phaser 550, you must use Tektronix's expensive proprietary memory. A 16MB SIMM from Tektronix costs $1195, compared to $30 to $50 per MB for off-the-shelf SIMMs. But in every other way, the Phaser 550 has hit a sweet spot for color lasers.

3 Lexmark Optra C

PROS: Excellent color quality, well-designed controls, universal paper tray

CONS: Its $6400 street price makes it the most expensive color laser on the chart

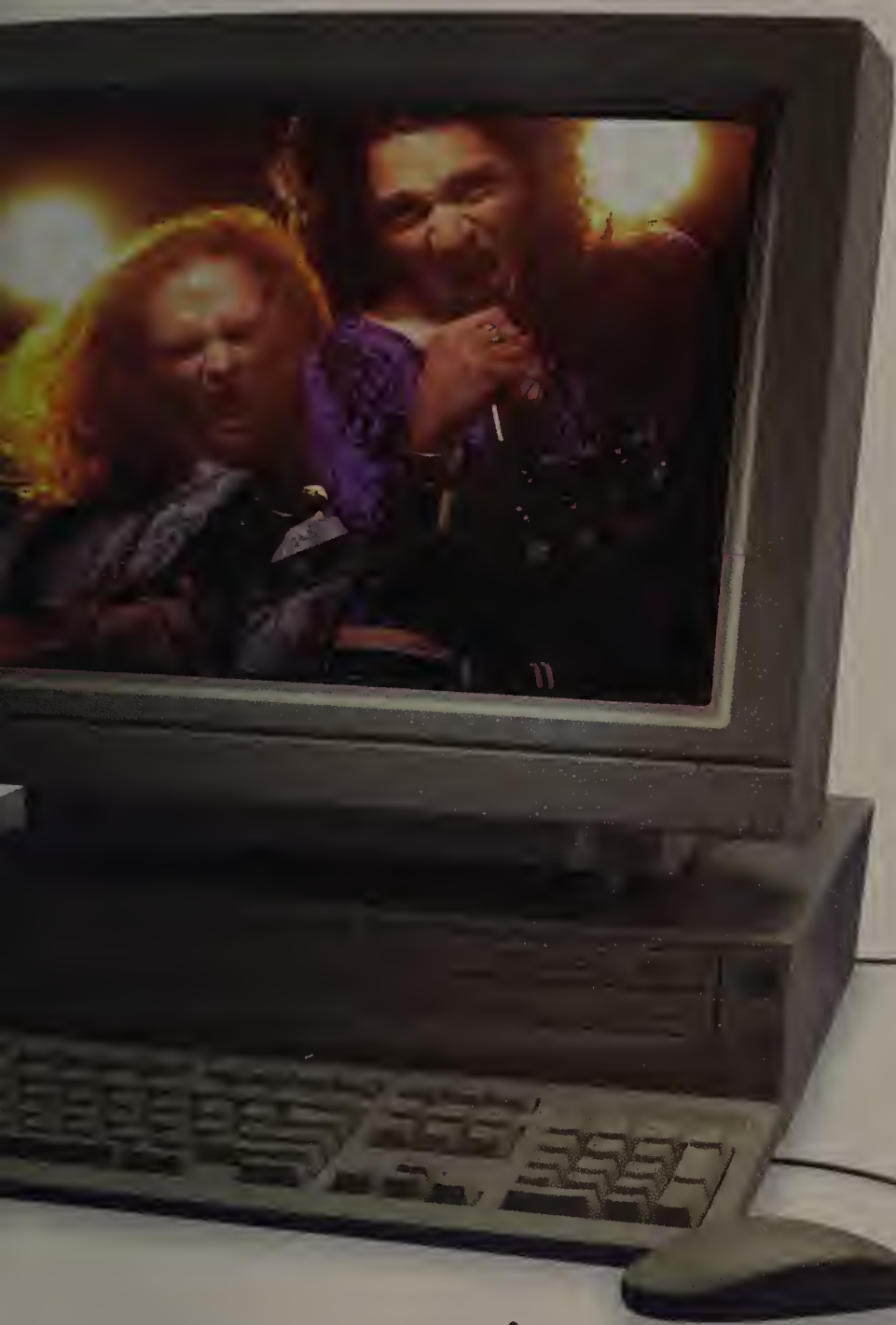
Landing third on the color chart is Lexmark's $6400 Optra C. Tektronix's Phaser 550 barely edged it out for second place.

The 600-dpi Optra C's print quality is nearly as good as the Phaser 550's. Text was legible down to 3 points—rivaling the quality of 600-dpi monochrome printers. Images such as photographs that require the smoothness of continuous-tone printing looked great using the default ColorGrade setting in Lexmark's driver. We improved on the default choices only slightly by using the better Contone setting and specifying High Quality color registration instead of Standard. This slows the printer down somewhat, but if you're looking for the very best color quality, it's worth the minor delay.

On individual timed tests, the Optra C was faster than the Tektronix printing Word documents in monochrome, but slower in Excel and Corel. It earned a lower overall speed rating in monochrome. On our color tests, it was the fastest overall.

The Optra C has the same control panel as the other Optras, and is very easy to understand without a manual nearby. Its universal paper tray holds 250 sheets of letter- or legal-size paper. What's more, it's an "intelligent" tray that can detect what size you've loaded and report it to the printer driver. This color laser is more expensive than the Tektronix Phaser 550, but in every other way it's a close rival.

A breakthrough in sound so real, your PC will have its own groupies.



Systems, the professional audio experts, inside your PC. It delivers the mind-bending realism of wave-table synthesis–which uses actual recordings of real sound effects and musical instruments. And it plays up to 32 notes simultaneously, adding new detail and richness to your favorite games and software.

AWE 32 is the first sound card that supports 3D Positional Audio™, so you can hear those dueling guitars coming at you from different places in the room. It also features Creative's 3D Stereo Enhancement Technology™, which makes your whole system sound richer and more powerful. (Our apologies to the neighbors.)

Our downloadable SoundFont® technology lets you add new sounds and instruments to your card. Add up to 28 MB of memory to create your own audio library. We even included a microphone and software for recording music and sound effects. And, of course, the AWE 32 is fully Plug and Play and works with Windows® 95, Windows 3.1 and DOS. So installation is a no brainer.

Check out our new line of Sound Blaster® Speakers, sold separately at your local dealer.

Want to complete your multimedia dream system? Pick up the new Blaster CD™ 8x CD-ROM and Sound Blaster Speakers too, at your nearest Creative Labs dealer. But take along your bodyguard, in case the groupies get carried away.

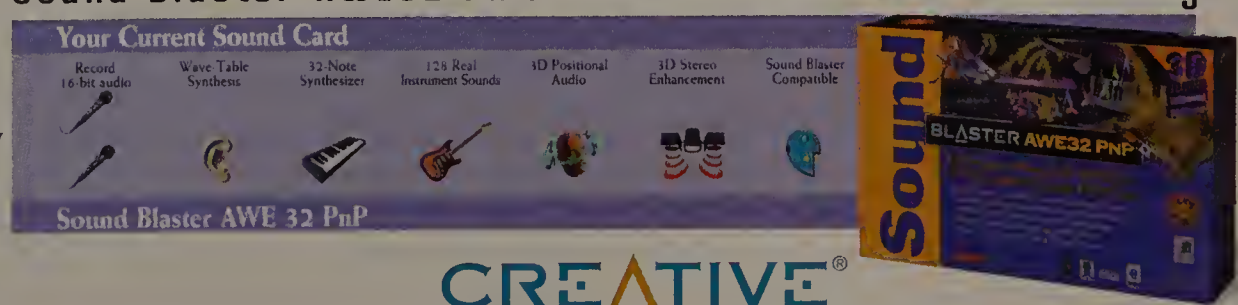
The crowd keeps growing until they have your house surrounded.

Then the chanting begins. "A-W-E…A-W-E…A-W-E."

It seems that Sound Blaster® AWE 32™ PnP is the first sound card to develop its own cult following. That's because it makes every other sound card seem like a blast from the past.

The AWE 32 puts professional sound technology from E-mu®

Sound Blaster AWE32 PnP. Hear What You've Been Missing



www.creativelabs.com

CREATIVE®
CREATIVE LABS, INC.

Circle 56 on reader service card

For more information call our Faxback service at 405-372-5227 or Customer Service at 800-998-5227 x135. © 1996, Creative Technology Ltd. All rights reserved. Sound Blaster and the Creative Labs logo are registered trademarks of Creative Technology Ltd. Sound Blaster AWE32, E-mu 3D Positional Audio and Creative 3D Stereo Enhancement Technology are trademarks of Creative Technology Ltd. SoundFont is a registered trademark of E-mu Systems, Inc. Windows is a registered trademark of Microsoft Corporation. Specifications are subject to change without notice.

TOP 3 NETWORK PRINTERS

		First reviewed	Type	Street price	Overall rating	Print quality rating	Speed rating	Batch print speed rating	Features, ease-of-use rating	Reader service number	Comments
MONOCHROME	1 Apple LaserWriter 16/600 PS 800/776-2333	current	laser	$2065	90	91	90	76	74	639	Best print quality; slow batch speed, holds only 750 sheets maximum.
	2 HP LaserJet 5Si MX 800/752-0900	current	laser	$4164	90	88	91	89	84	640	Very fast, handles many sizes and types of media.
	3 QMS 2425Ex 800/523-2696	current	laser	$5949	83	88	92	91	90	641	Fastest; most expensive; nearly identical to HP unit.

BEST BUY

Methodology Network printers have rated engine speeds of 17 to 25 pages per minute. The overall rating includes ratings for print quality (25 percent), performance (25 percent), price (15 percent), features and ease of use (15 percent), service and support (15 percent), and consumables (5 percent). For all ratings, higher is better. Data based on tests designed and conducted by the PC World Test Center.
All rights reserved.

For more information about all products in this table, circle reader service no. 904.

Network Printers

1 Apple LaserWriter 16/600 PS

PROS: Excellent print quality, lowest-priced printer on the network chart

CONS: Upgrading RAM is inconvenient, slow batch printing, maximum input is only 750 sheets

Apple's $2065 LaserWriter 16/600 PS is inexpensive for a network printer, but its print quality is the best, and its overall performance is good for a 17-ppm laser.

This Apple has just a couple of worms. Its 750-sheet maximum paper capacity is skimpy; even some workgroup models can take 1000 or more sheets. Upgrading RAM requires tools for handling a number of screws. (Other units usually have two simple thumbscrews for removing the controller board.) With paper capacity and RAM upgrades our only major complaints, the Apple easily earns a Best Buy over more expensive models on the chart.

2 HP LaserJet 5Si MX

PROS: Very good print quality, fast performance, flexible paper handling

CONS: Expensive compared to the Apple LaserWriter 16/600 PS

One of the two 24-ppm models we tested, the HP LaserJet 5Si MX also wins a Best Buy spot. It's the second-fastest printer on the network chart—a nose slower than the QMS 2425Ex, which uses the same engine—and it has sharp print quality, especially in gray scale. At $4164, the HP costs over twice as much as the Apple Best Buy. But the HP is the better choice for offices that print a high volume of documents on a wide variety of papers.

The LaserJet 5Si MX takes up a lot of room, but it can do more than most printers. Out of the box, the 5Si MX can handle papers ranging from 16-pound bond to 110-pound index card stock, as well as tabloid paper and envelopes. Its maximum paper capacity with optional input trays is a whopping 3000 pages. You can buy additional hardware for printing in duplex on 11-by-17-inch sheets—a first in desktop lasers—and a high-capacity output stacker that can also provide individual mailboxes for printouts. Ready to print almost anything in any amount you want—and fast, too—the HP LaserJet 5Si MX is the Best Buy for big, busy offices.

3 QMS 2425Ex

PROS: Very good print quality, fastest network printer, comes with 256MB hard drive

CONS: Essentially the same printer as the HP 5Si MX, but much more expensive

The QMS 2425Ex's print quality and configuration, which includes 24MB of RAM and a 256MB hard drive, are hard to beat. But you'll pay for these goodies: Its $5949 price is almost $1800 more than the HP LaserJet 5Si MX's.

Like the HP, the QMS has a control panel that protrudes from the front of the machine. This control panel is easier to use than the HP's, however—there are more one-step buttons on the QMS, and they're easier to understand. QMS also offers a scanner/copier device that attaches to the printer's SCSI port. Something else your network administrator will like: The resident flash ROM lets you easily update the unit's firmware—no need to remove the controller board and replace old ROM when updated firmware becomes available. For some offices that need the printing power that the QMS 2425Ex offers, these distinctive features could offset its high price.

There are other ways to accelerate your multimedia, but may we suggest our new Graphics Blaster.

Multimedia can be a frustrating thing. Even on today's hottest systems, video playback can end up looking like a postage stamp with fewer colors than you get from a box of crayons. Or, when you zoom it to full screen, it looks like a slide show instead of a smoothly running movie. Before you resort to extremes, you might want to try our new Graphics Blaster™ multimedia accelerator from Creative Labs.

Graphics Blaster features high-tech video acceleration functions like asymptotic scaling, horizontal and vertical filtering and color space conversion built right into the hardware. The end result is video that glides onto the screen in dazzling true color without dropping frames. And the powerful 64-bit graphics engine delivers Windows® performance that will blow you away.

Best of all, Graphics Blaster won't blow away your bank account. Our top-of-the-line Graphics Blaster MA302 with 2MB of state-of-the-art Rambus memory — the same high performance memory used on Silicon Graphics workstations — costs less than comparable boards using yesterday's tired VRAM memory.

So when you're ready to boost your graphics and video performance to the stratosphere, pick up a Graphics Blaster at your nearest Creative Labs dealer. It's got the multimedia muscle your system deserves. What else would you expect from Creative Labs, the leader in high-performance multimedia products.

Introducing Graphics Blaster Multimedia Accelerators

	64-bit Graphics Engine	16.7 Million Colors	Maximum Resolution	Refresh Rate	Plug and Play Monitor	Full-Screen Video Playback
Typical Graphics Accelerator	64 bit		1280 1024	120Hz		
Graphics Blaster MA302 Multimedia Accelerator	64 bit		1600 1200	150Hz		3

CREATIVE
CREATIVE LABS, INC.
http://www.creativelabs.com

For more information call our Faxback Service at 405-372-5227 or Product Information at 800-998-5227 x 136. © 1996 Creative Technology Ltd. All rights reserved. Graphics Blaster is a trademark of Creative Technology Ltd. The Creative logo is a registered trademark of Creative Technology Ltd. Windows is a registered trademark of Microsoft Corporation. All other brand or product names are trademarks or registered trademarks of their respective holders. Specifications subject to change without notice.

Circle 59 on reader service card

Printer Snapshots

These printers were also tested and reviewed but didn't score high enough to reach the charts.

Apple Color LaserWriter 12/600 PS

PROS: Excellent color printing; ethernet, LocalTalk, SCSI standard

CONS: Slowest color laser

Under our old Windows 3.1 test suite, the $6499 Color LaserWriter 12/600 PS ranked second on our color workgroup chart. The Apple's painfully slow print times with our new Windows 95 tests, however, have dragged it off the chart.

To the Apple's credit, print quality is great. In photographic images, it caught small details, such as labels on a dashboard, that were printed less distinctly by other color lasers. *Apple Computer, Inc., 800/776-2333.* **Reader service no. 816**

Brother HL-960

PROS: Least expensive monochrome workgroup contender

CONS: Slow, needs an external networking device, no PostScript

The $999, 12-ppm HL-960 fulfills basic monochrome printing needs—nothing more. It's one of the slower monochrome workgroup printers we tested, its print quality was unimpressive, and it's not networkable unless you buy a third-party device. *Brother International, 800/276-7746.* **Reader service no. 817**

HP Color LaserJet 5M

PROS: Fastest color laser's matte-finish toner is easy on the eyes

CONS: Expensive, not good for sophisticated graphics

At $7395, the Color LaserJet 5M is the most expensive color workgroup laser we reviewed. Granted, it's the fastest color laser we've tested and comes with ethernet and LocalTalk, as well as 24MB of RAM, but for that much money we'd also want better print quality on continuous-tone images like photographs. The Color LaserJet 5M can print simple color images like bar charts competently. But when we tried more complex images, it didn't achieve the sharper detail of other color lasers we've seen. *Hewlett-Packard, 800/752-0900.* **Reader service no. 818**

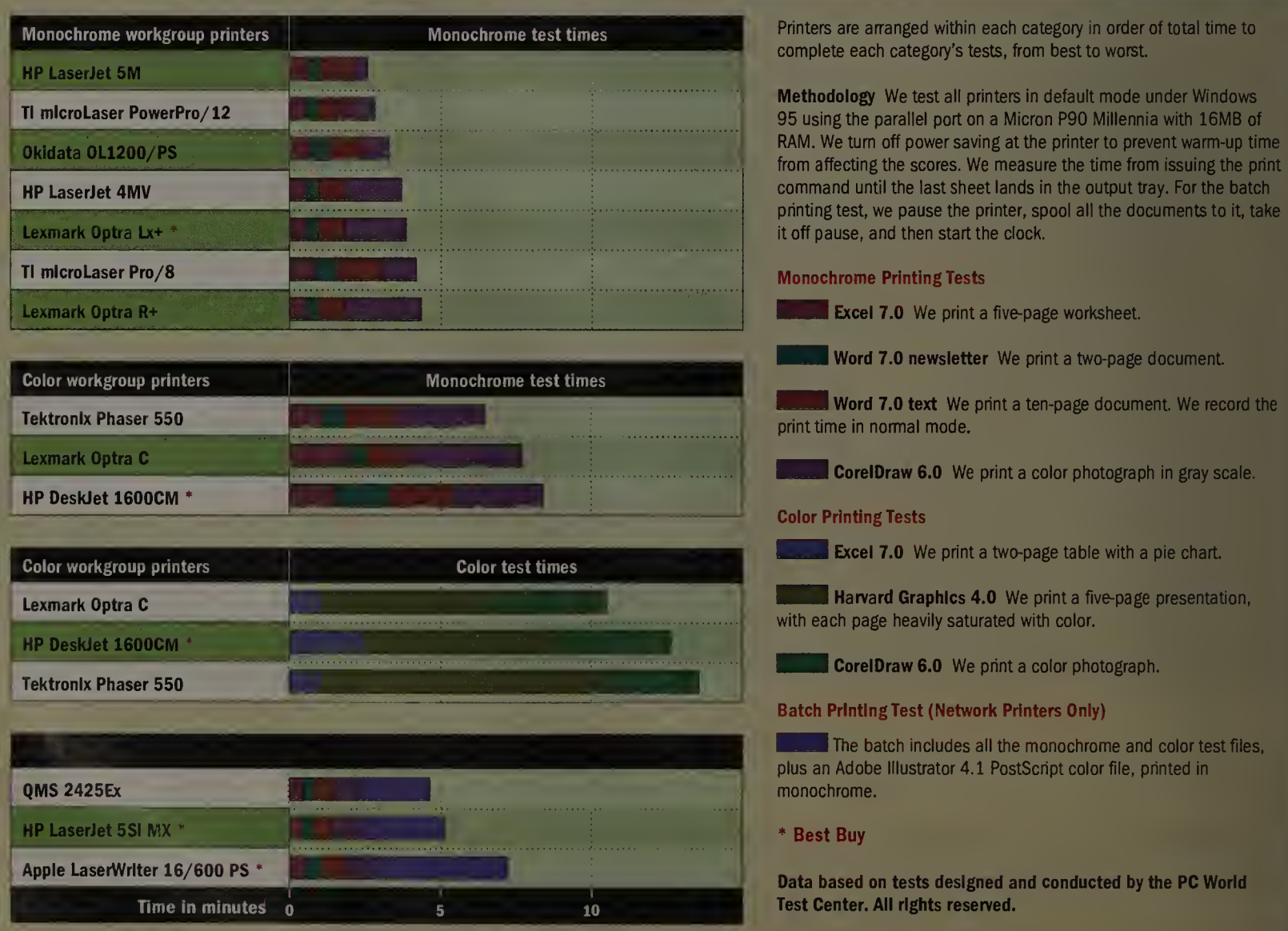
Kyocera FS-1600+, FS-3600+

PROS: Very low cost per page, a plethora of paper tray options

CONS: Measly 2MB of RAM standard, mediocre print quality

The $1483 FS-1600+, a workgroup contender, has a 10-ppm engine, and the $3113 FS-3600+, a network contender, has an 18-ppm engine. Neither monochrome unit made the charts: Their standard configurations are bare-bones, and they both had mediocre print quality.

The Kyoceras come with just 2MB of



Printers are arranged within each category in order of total time to complete each category's tests, from best to worst.

Methodology We test all printers in default mode under Windows 95 using the parallel port on a Micron P90 Millennia with 16MB of RAM. We turn off power saving at the printer to prevent warm-up time from affecting the scores. We measure the time from issuing the print command until the last sheet lands in the output tray. For the batch printing test, we pause the printer, spool all the documents to it, take it off pause, and then start the clock.

Monochrome Printing Tests

Excel 7.0 We print a five-page worksheet.

Word 7.0 newsletter We print a two-page document.

Word 7.0 text We print a ten-page document. We record the print time in normal mode.

CorelDraw 6.0 We print a color photograph in gray scale.

Color Printing Tests

Excel 7.0 We print a two-page table with a pie chart.

Harvard Graphics 4.0 We print a five-page presentation, with each page heavily saturated with color.

CorelDraw 6.0 We print a color photograph.

Batch Printing Test (Network Printers Only)

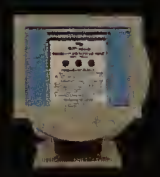
The batch includes all the monochrome and color test files, plus an Adobe Illustrator 4.1 PostScript color file, printed in monochrome.

*** Best Buy**

Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

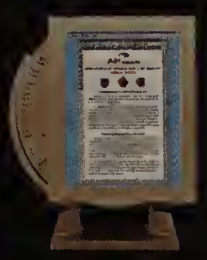
ONE OF THE MANY REASONS MORE AND MORE PEOPLE NEED PIVOT MONITORS.

They're describing their ordinary monitors as "vertically challenged."



Don't blame your monitor for being short and wide. It's the way most of them are built. Most, except for the MicroScan™ 17X. With a simple swivel, the MicroScan 17X provides more vertical viewing area than any other 17" and even 21" monitors. Just imagine how much easier that would make working with Windows,® web pages, or any kind of applications. Once you see the MicroScan 17X pivot monitor in action, you may never turn back. To find out, call:

1-800-228-0530.



The MicroScan 17X features a 17" CRT (16" diagonal viewing area), 1024 x 768 resolution, 76Hz flicker-free refresh rate and .28mm dot pitch.

ADI

© 1996 ADI Systems, Inc. 2115 Ringwood Avenue, San Jose, CA 95131. MicroScan is a trademark of ADI Systems, Inc. All other brands or product names are trademarks of their respective companies. http://www.adi-online.com

RAM and a 250-sheet input tray. This is barely enough to function in an office, and in the case of the FS-3600+, we had to upgrade memory to 10MB before the printer could finish our speed tests.

The Kyoceras offer numerous paper tray options, and their cost per page is very low. But the other flaws overshadowed these attributes. *Kyocera Electronics Inc., 800/232-8797.* **Reader service no. 819**

Xerox 4520mp

PROS: Prints on tabloid-size paper, holds up to 2250 sheets

CONS: Lackluster performance, protruding paper trays are clumsy

A network contender, the $3643 Xerox 4520mp's high (2250-sheet) paper capacity and its ability to print on tabloid-size paper make it a near equal to the HP and QMS printers that made the chart. But these attributes couldn't compensate for the slow performance of its 20-ppm en-

FEATURES COMPARISON Printers for Offices Big and Small

● = Yes ○ = No

n/a = not applicable

	HP LaserJet 4MV	HP LaserJet 5M	Lexmark Optra Lx+	Lexmark Optra R+	Okidata OL1200/PS
Standard features	MONOCHROME WORKGROUP PRINTERS				
Printer type	laser	laser	laser	laser	LED
Street price as of 4/4/96	$2916	$1799	$1950	$1450	$1563
Maximum black resolution as configured (dpi)	600 x 600	600 x 600	600 x 600 [1]	600 x 600 [1]	600 x 600
Maximum color resolution as configured (dpi)	n/a	n/a	n/a	n/a	n/a
Installed/maximum RAM (MB)	12/44	6/52	4/64	2/48	6/34
Rated engine speed (ppm), monochrome/color	16	12	16	16	12
Monthly duty cycle (pages)	50,000	35,000	75,000	35,000	24,000
Standard connectivity	parallel, ethernet, LocalTalk	parallel, ethernet, LocalTalk	parallel, serial	parallel, serial	parallel, serial, LocalTalk
Standard page description languages	PS Level 2, PCL 5e	PS Level 2, PCL 6	PS Level 2, PCL 5e	PS Level 2, PCL 5e	PS Level 2, PCL 5e
Cost of consumables [2]					
List price of black ink or toner cartridge	$199	$160	$199	$199	$65
Cartridge life (pages)	8100	6800	7000	7000	5000
List price/page life of drum or printhead [3]	n/a	n/a	n/a	n/a	$335/30,000
List price of color ink or toner cartridge	n/a	n/a	n/a	n/a	n/a
Cartridge life (pages)	n/a	n/a	n/a	n/a	n/a
Cost for standard monochrome text page [4]	2.5¢	2.3¢	2.8¢	2.8¢	2.4¢
Cost for standard color page [4]	n/a	n/a	n/a	n/a	n/a
Design					
Specified width x depth x height (inches)	18.1 x 20.6 x 12.5	17.4 x 16 x 11.8	16.1 x 21.1 x 17.2	16.1 x 21.1 x 13.1	14.4 x 16.9 x 10.6
Specified weight (pounds)	51	37	46	40	35
Printing power consumption (watts)	385	300	320	320	600
Paper handling					
Standard/maximum capacity (pages)	250/750	250/750	500/1300	200/1000	500/1100
Output tray capacity (pages)	250	250	500	250	250
Maximum paper size	tabloid	legal	legal	legal	legal
Standard/maximum envelope capacity	10/10	10/75	1/75	1/75	10/50
Service and support					
Warranty (years)	1	1	1	1	1
Toll-free tech support	○	○	●	●	●
Weekday tech support (hours)	16	16	10	10	10
Weekend tech support/on-site service	●/●	●/●	○/●	○/●	○/○
Repair turnaround policy (days)	1	1	1	1	3
Fax-back service	●	●	●	●	●
Online support sites	AOL, BBS, CIS, WWW	AOL, BBS, CIS, WWW	BBS, CIS, WWW	BBS, CIS, WWW	BBS, WWW

BEST BUY

[1] 1200 x 1200 dpi with RAM upgrade.

[2] Based on vendor estimates.

[3] For printers with a long-life drum and replaceable toner.

gine. It barely kept up with some of its 17-ppm rivals in the network category. *Xerox, 800/349-3769.* **Reader service no. 820**

Xerox DocuPrint 4517

PROS: Good print quality

CONS: Slow, measly 2MB of RAM isn't enough for complex images

A network printer, the Xerox DocuPrint 4517 includes a very small amount of RAM (2MB) in its standard configuration. This probably helped keep its initial price a low $1850, but it also hampered the printer's speed. The DocuPrint 4517 printed our test suite slowly, and we had to add 8MB of RAM to the machine for it to be able to handle more complex graphics. A variation on this printer, the DocuPrint 4517mp, comes with 6MB of RAM, ethernet, and PostScript Level 2 for $2550. *Xerox, 800/349-3769.* **Reader service no. 821**

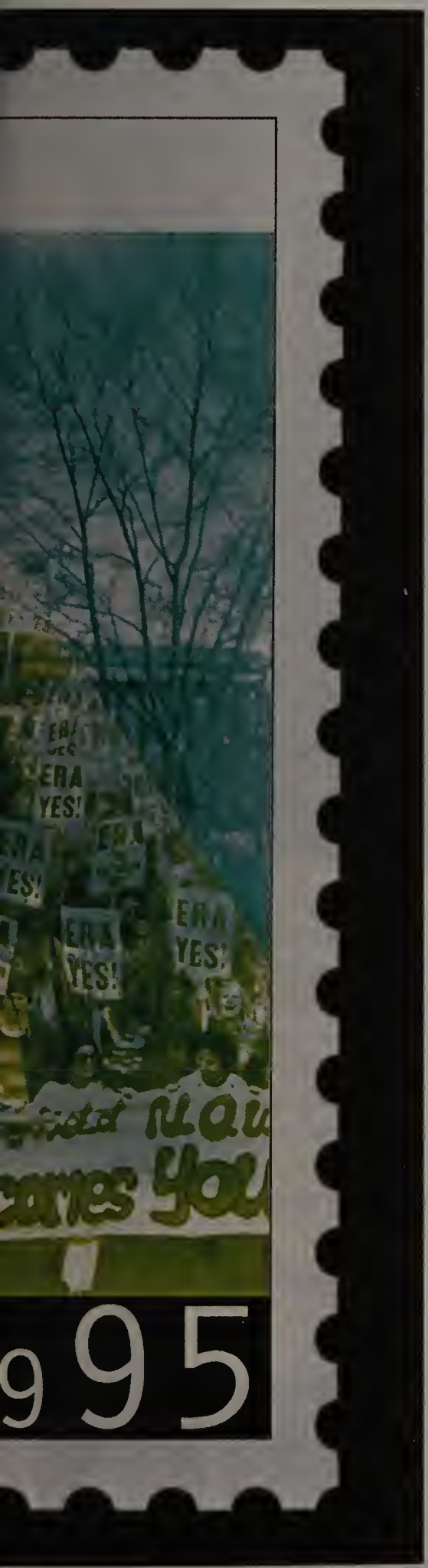
	TI microLaser PowerPro/12	TI microLaser Pro/8	HP DeskJet 1600CM	Lexmark Optra C	Tektronix Phaser 550	Apple LaserWriter 16/600 PS	HP LaserJet 5Si MX	QMS 2425Ex
			COLOR WORKGROUP PRINTERS			MONOCHROME NETWORK PRINTERS		
	laser	laser	ink jet	laser	laser	laser	laser	laser
	$1439	$1169	$1999	$6400	$5945	$2065	$4164	$5949
	600 x 600	600 x 600	600 x 600	600 x 600	600 x 600 [1]	600 x 600	600 x 600	600 x 600
	n/a	n/a	300 x 300	600 x 600	600 x 600	n/a	n/a	n/a
	3/19	3/19	6/70	8/64	8/72	8/32	12/76	24/128
	12	8	9/4	12/3	14/5	17	24	24
	10,000	10,000	12,000	15,000	20,000	50,000	100,000	100,000
	parallel, LocalTalk	parallel, LocalTalk	parallel, ethernet, LocalTalk	parallel, serial, LocalTalk	parallel, SCSI	parallel, ethernet, LocalTalk, SCSI	parallel, ethernet, LocalTalk	parallel, ethernet, SCSI
	PS Level 2, PCL 5e	PS Level 2, PCL 5e	PS Level 2, PCL 5e	PS Level 2, PCL 5e	PS Level 2, PCL 5	PS Level 2, PCL 5	PS Level 2, PCL 5e	PS Level 2, PCL 5e
	$199	$199	$32.95	$119	$199	$97.98	$260.50	$259
	15,000	15,000	1600	4000	10,000	6000	15,000	15,000
	$199/30,000	$199/30,000	n/a	$179/15,000	$755/60,000	n/a	n/a	n/a
	n/a	n/a	$34.95	$139	$269	n/a	n/a	n/a
	n/a	n/a	1600	4000	8000	n/a	n/a	n/a
	2.5¢	2.5¢	2¢	4.2¢	3.2¢	1.6¢	1.7¢	1.7¢
	n/a	n/a	9.9¢	21¢	20.7¢	n/a	n/a	n/a
	13 x 14.4 x 12.8	13 x 14.4 x 12.8	20 x 17 x 11	21.3 x 22.8 x 18	27.4 x 19.5 x 18	16.8 x 16.9 x 12.1	21.3 x 20.5 x 21.3	22.3 x 21.9 x 21.3
	32	32	25	110	117	40	99	106
	650	650	66	450	210	390	515	580
	500/500	500/500	180/680	250/500	250/750	250/750	1000/3000	1000/3000
	250	250	100	100	250	250	600	600
	legal	legal	legal	legal	legal	legal	tabloid	tabloid
	1/30	1/30	1/20	n/a	n/a	10/10	100/100	1/100
	1	1	1	1	1	1	1	1
	●	●	○	●	●	●	○	●
	8	8	16	10	11	12	16	12
	○/●	○/●	●/○	○/●	○/●	○/●	●/●	○/●
	3	3	1	1	1	○	1	10
	●	●	●	●	●	●	●	●
	BBS	BBS	AOL, BBS, CIS, WWW	BBS, CIS, WWW	AOL, BBS, CIS, WWW	BBS	AOL, BBS, CIS, WWW	BBS, WWW

[1] Letter-size documents at 5 percent page coverage for black or 7.5 percent coverage per color.

APRIL GREIMAN

Image created by April Greiman ©1995 U.S. Postal Service. Adobe, Adobe PageMaker, Adobe Acrobat and the tagline, "If you can dream it, you can do it" are trademarks or registered
sidiaries which may be registered in certain jurisdictions. All other marks and trademarks are the property of their respective companies. ©1996 Adobe Systems Incorporated. All

on PAGEMAKER 6.0.



While other designers were hunched over their drafting boards, April Greiman was among the first to realize the potential of electronic technology using Adobe™ PageMaker™. Today she is a recognized leader in graphic, environmental, motion and interactive format design. She has earned lasting recognition for trend setting graphics, interactive television interface designs, textiles, even industrial surfaces. Her graphic software then and now: Adobe PageMaker. Today's new Adobe PageMaker 6.0 is more powerful and advanced than ever. It's integrated with Kodak's Precision Color Management System for incredible color control. For more complex jobs, multiple master pages speed the creation of different pages in a single publication. Other new features include grouping and ungrouping to move and edit multiple elements as a whole and integrated automatic trapping for color publications. And to help April create and publish great work anywhere, even across the Web, she can output her files in HTML and the Adobe Acrobat™ Portable Document Format (PDF). Finally, Adobe PageMaker 6.0 is so easy to use, you don't have to be a leader in digital design to use it. But Adobe PageMaker could help you look like one. Call 1-800-422-3623, Ext. E1672 for more information or visit our Web site at http://www.adobe.com/.

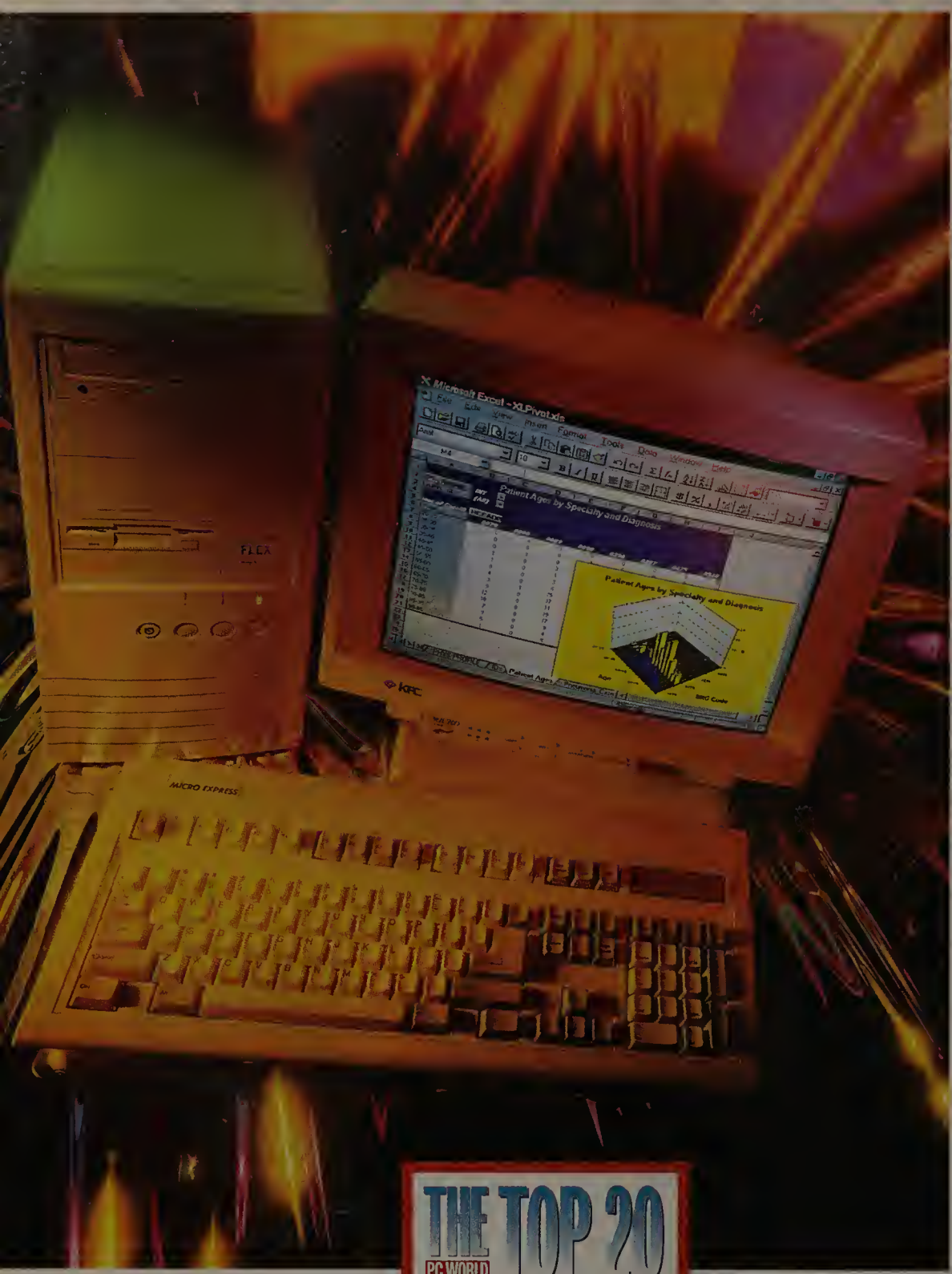
If you can *dream* it, you can *do* it.™

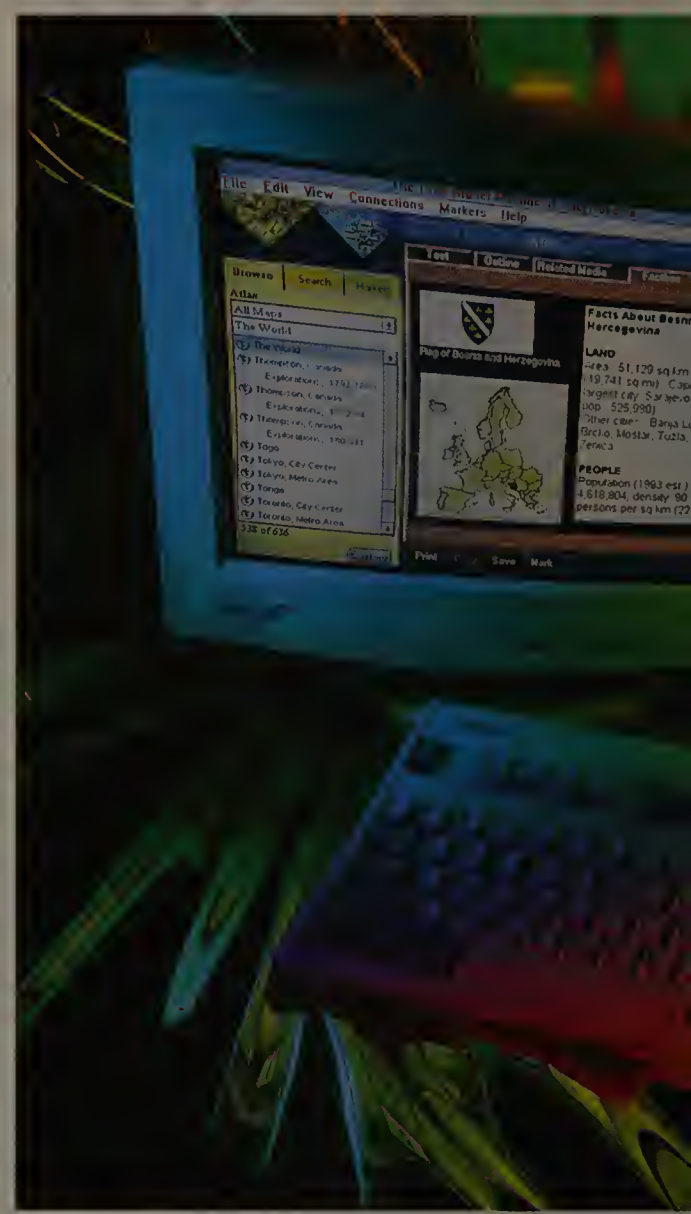
Adobe

trademarks of Adobe Systems Incorporated or its sub-
rights reserved.

Circle 12 on reader service card

New desktop PCs with Cyrix processors have the speed to challenge top-ranked Pentiums





THE TOP 20 PC WORLD

Power pg. 176
Budget pg. 184
Notebooks pg. 192

If it weren't for good old-fashioned competition, we'd probably all be using Macs. After all, Apple put the "ease" in ease of use long before Microsoft started touting Plug and Play. But heated competition in the IBM-compatible–PC market keeps prices down and accelerates innovation, resulting in a vast selection of PC products.

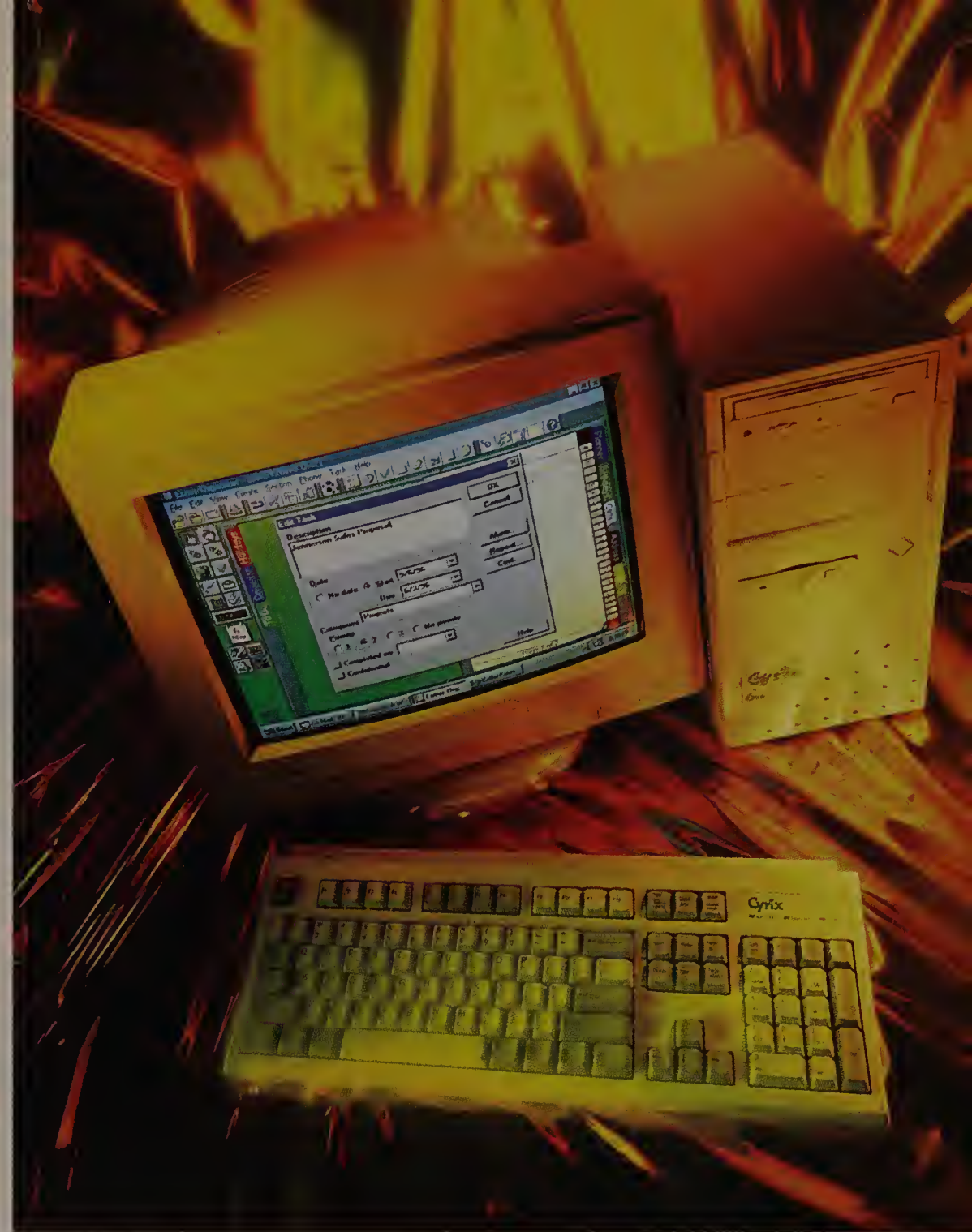
Pentiums

LEFT: The Micro Express MicroFlex-686/P120+ is fast and affordable.

CENTER: Sys Technology pushes its Performance C166+ to the speed limit.

RIGHT: Cyrix's own 6x86-P166+ PC is loaded with powerful extras.

performers from Dell and Micron.



MICHAL VENERA

The latest battle is for the very heart of your PC—its CPU. After failed attempts by several companies to break Intel's stranglehold on the CPU market, Cyrix seems to have a winning formula. The Cyrix 6x86 family of CPUs is as fast as Intel's Pentium line, or faster. In fact, the individual chips are named for their Pentium-like performance, not for their clock speeds. For example, the 6x86-P166+ PC runs at 133 MHz but performs like a fast 166-MHz Pentium. The chips are also cost competitive. When they first came out, Cyrix chips cost roughly 20 percent less than Pentiums. This differential allowed early adopters to give buyers more for their money in the way of other features. As we went to press, Intel announced large price cuts across its

By Brad Grimes

Meet Their Match

Pentium series to bring its CPUs in line with Cyrix 6x86 chips. So look for even better deals on PCs in the coming months.

So far, only two third-party vendors—Micro Express and Sys Technology—have adopted 6x86 chips. This month the $1899 Micro Express MicroFlex-686/P120+ and the $2599 Sys Technology Performance C166+ earn spots on our Budget and Power charts, respectively. The MicroFlex is faster than any P-120 we've tested, while the Sys Performance equals the speed of the fastest P-166 we've tested.

But Cyrix is so confident of its new CPUs, it has started its own line of systems. This month we tested the $4639 Cyrix 6x86-P166+ PC, which landed at number 15 on the Power Desktops Top 20. It's actually more expensive than most P-166s we've tested, but that's because Cyrix loaded this model with a 4GB SCSI hard drive and an Adaptec SCSI controller. The standard configuration, which has a 2GB IDE drive, is more than $1300 cheaper.

A Desktop PC for Your Briefcase

We have a new number one power notebook. The $5599 Gateway 2000 Solo S5-120XL is the second-fastest portable we've ever tested, due in part to its 40MB of RAM. Gateway markets this as its "Best Buy" model. It comes with enough memory to choke one of the cows in the company's ads, a 1.3GB hard drive, a 4X CD-ROM drive, and a 28.8-kbps PC Card modem. If that's not enough, it lasted over 5.5 hours in our battery test.

Another newcomer to the power notebook charts this month is the $3299 AST Ascentia J30. This P-100 system is lightweight and runs for over 5 hours.

On our budget notebooks chart, Toshiba claims both Best Buys now that Dell has discontinued its highly successful Latitude LX line. The top-ranked $1999 Satellite 100CS is a great value if you want a Pentium portable, while the number two $1599 Satellite T2130CS is even cheaper—an excellent deal if you don't mind its slower DX4-75 processor.

You'll notice some significant changes in our reliability and service scores for notebook vendors. We refreshed our data with a new reader fax-back survey and modified the way we calculate a company's service rating. According to the responses we've received, Toshiba continues to sell the most reliable notebooks, and now it also provides the best service. Readers are less satisfied with IBM's system reliability than in the past but appreciate the service the company provides.

Dell remains firmly entrenched atop our Power and Budget Desktops charts. Soon Dell will replace its "c" series with an "s" line that features a new case design, chip set, and memory architecture. For now, the Dimension XPS P133c remains the best value in a power desktop. Meanwhile, the new $1879 Dimension P100t debuts at number one on the Budget chart.

Hewlett-Packard grabs a Best Buy on our Power chart with its new Vectra 500 Model 515MCx 5/166. The Vectra 500 comes with lots of good software and a modem that supports voice mail, making it a perfect fit for small businesses.

Perhaps the most notable system *not* to make the chart is the $5699 Xi Pro 200 MTower SP. It's the first desktop PC we've reviewed that uses a Pentium Pro-200 processor with Windows 95. The Xi model is the fastest PC we've tested, and it's loaded with memory and storage. Next month we'll look at Pentium Pro-200s from Dell and Quantex.

Brad Grimes is an associate editor for PC World. *He can be reached on PC World Online (see page 14 for contact information). Freelance writers Jon L. Jacobi and Owen Linderholm contributed to this article. Testing by Ulrike Diehlmann; research and support by Ann Cassidy, Andrew Hawn, and Julian Weatherby.*

For more information about all products in this article, circle reader service no. 910.

Coming Soon to a PC Near You

Pentium-200 processors. By the time you read this, systems based on Intel's latest Pentium chip will be available from several PC vendors. But don't jump on the bandwagon just yet: Our first look at P-200 PCs indicates they're not much faster than current P-166 systems (see *Top of the News*).

CD-recordable drives. As prices on CD-R drives fall, expect vendors to slip them into high-end PCs. These drives let you create your own CD-ROMs to hold multimedia presentations or a sampling of your favorite music. Gateway 2000 will be the first to ship a PC with a CD-R drive (for about $600 extra); it should be available by the time you read this.

3-D accelerator boards. They're just slightly more expensive than current video boards, but they speed up multimedia applications and business programs that make use of 3-D graphics. They'll start showing up in PCs this summer, but don't look for much in the way of 3-D software till the end of the year.

128-bit graphics controllers. Currently, virtually every PC on the market comes with a 64-bit graphics chip. New boards like Number Nine's Imagine128 Series 2 and STB's Lightspeed 128 have wider data paths for speeding today's more graphical applications.

Universal memory architecture. UMA eliminates the need for separate graphics memory in your PC by allocating a portion of main system RAM to act as a frame buffer. Skeptics, including Microsoft, are afraid UMA will hurt system performance, and early tests in our lab indicate they could be right.

DO NOT BITE THIS MONITOR.

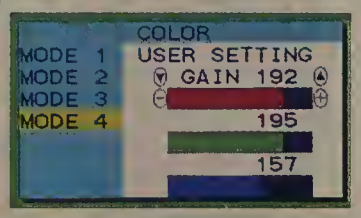
WARNING: The images you see on the new CTX PR900™ Professional Line Monitors are not real.

We say this because artists, graphic designers, and CAD/CAM users everywhere keep mistaking the PR900's sharp, distortion-free images for the objects they represent.

Maybe it's because the 21-inch PR900 offers the crispness of Diamondtron™ technology. With a colossal 19.6-inch viewable screen area and 0.31-mm aperture grille for uncommon contrast.

Or perhaps it's the PR900's 1600 x 1200 maximum resolution. And anti-glare, anti-static, anti-reflection screen. With vibrant colors that make other monitors pale in comparison.

In any case, with features like Windows® 95 Plug & Play, TCO '92 Certification, and Power Management—plus PC, Mac & SPARC compatibility—the PR900 is an unreal buy. Especially since it costs hundreds less than any monitor in its class.



The on-screen display (OSD) features over 30 user-friendly functions—for the most intricate adjustments.

Since seeing is believing, we invite you to visit your nearest CTX dealer. But remember—just look, don't bite. Sales information: **1-800-888-2012, http://www.ctxintl.com.** FasFax phone: 818-837-4341 (account #26, document #521).

CTX

Commitment To Excellence.

PR900 is a registered trademark of CTX. Other trademarks are the property of their respective owners.

See the new CTX PR900 at PC Expo, Booth #4562.
Circle 74 on reader service card

VISIO

Graphics technology

that will change the way you work.

Look who's using it.

Try it.

See what it can do for you.

How you look

Amoco is saving 5% per project or up to 20 million dollars by using Visio to better plan and manage its oil exploration. Other companies use it to save time. Still others to increase productivity. You'll find lots of companies have adopted Visio. Companies such as Chrysler, National Semiconductor and Fluor Daniel.

© 1996 Visio Corporation. Visio and SmartShapes are registered trademarks of Visio Corporation. All other trademarks are held by their respective companies.

Look at things with Visio and suddenly everything becomes clearer. You can see gaps in your organization, conflicts in timelines or weaknesses in process flow. No, you don't have some secret sixth sense. You have graphics technology that can be integrated in every department, across your entire company. Our SmartShapes® symbols let you create network diagrams, organizational charts and engineering schematics that are both intuitive and intelligent. Visio and Visio Technical are also fully compatible with Word, Excel, Lotus Notes and AutoCAD. If you're ready to see more, call 800-24-VISIO, ext. F30. For corporate evaluation call 800-VISIO-07.

at things

can profoundly affect

what you see

VISIO®

http://www.visio.com

THE TOP 20

PC WORLD

POWER DESKTOPS

1 **Dell Dimension XPS P133c**
Going out on top.

	Last month	Months on chart	Last reviewed	Overall rating [1]	PC WorldBench score	Reliability/ service rating	Price	CPU	RAM (MB)	Hard drive (MB)
1 Dell Dimension XPS P133c	1	9	current	92	192	77/77	$3299	Pentium-133	16	1080
2 Dell OptiPlex GXMT 5133	4	4	Apr 96	89	184	77/77	$3355	Pentium-133	16	1624
3 Micron P133 Millennia	2	12	Mar 96	89	182	76/69	$2649	Pentium-133	16	1624
4 HP Vectra 500 Model 515MCx 5/166	–	1	current	88	192	78/66 [3]	$3345	Pentium-166	16	1624
5 Micron P166 Millennia Plus	3	6	Mar 96	86	198	76/69	$4148	Pentium-166	16	2150
6 Maximus Magna Media P-166	–	1	current	84	201	[3]	$2499	Pentium-166	16	2140
7 HP Vectra VL Series 4 5/166 MT	6	3	May 96	83	197	78/67 [3]	$3915	Pentium-166	16	1624
8 NEC PowerMate P133	5	6	Mar 96	82	185	70/68 [3]	$2679	Pentium-133	16	1624
9 Xi Computer P166MTower SP	–	1	Apr 96	82	199	[3]	$3199	Pentium-166	16	1280
10 Compaq Deskpro XL 5133	10	5	Mar 96	81	173	76/71	$4099	Pentium-133	16	1080
11 Gateway 2000 P5-133	11	5	Mar 96	81	186	68/69	$2639	Pentium-133	16	1624
12 Gateway 2000 P5-133XL	15	2	Jun 96	81	172	68/69	$2969	Pentium-133	16	1624
13 Quantex QP5/133 SM-2	–	1	current	80	186	63/63	$2599	Pentium-133	16	2000
14 Compaq Deskpro 5133	12	3	Mar 96	80	161	76/71	$3599	Pentium-133	16	1080
15 Cyrix 6x86-P166+ PC	–	1	current	80	199	[3]	$4639	Cx6x86-P166+	16	4000
16 Compaq ProLinea 5120	–	3	Mar 96	80	169	76/71	$2898	Pentium-120	16	1075
17 Digital Celebris GL 5166ST	7	2	Jun 96	80	198	74/67 [3]	$4999	Pentium-166	16	1600
18 Polywell Poly 5166P8	14	2	May 96	80	201	[3]	$2550	Pentium-166	16	1080
19 PerComp P166 Professional	–	1	May 96	79	192	[3]	$2899	Pentium-166	16	1080
20 Sys Technology Performance C166+	–	1	current	79	208	[3]	$2599	Cx6x86-P166+	16	1280

BEST BUY

[1] Percent contribution to overall rating: PC WorldBench score (25); reliability (25); features (20); price (15); service and support (15).
[2] To order fax copies of system reviews, call 800/434-4495 from a touch-tone phone and use your credit card. You can order next month's reviews in advance: Power Desktop, Budget Desktop, or Notebook PCs Top 20 charts and capsule reviews ($9.95, available June 26). You can also order a previous month's Top 20 chart with capsule reviews plus Features Comparison and Test Report ($4.50) and Individual capsule reviews with Feature Comparison and Test Report ($1.50 each). Prices effective for the

2 **Dell OptiPlex GXMT 5133**
Good on its own or in a group.

3 **Micron P133 Millennia**
Power and quality for less.

4 **HP Vectra 500 Model 515MCx 5/**
Perfect for small or home offices.

5 **Micron P166 Millennia Plus**
With a SCSI twist.

CD-ROM drive	Bus slots	Monitor size/ dot pitch	Vendor contact number	Fax reprint number[2]	Reader service no.	Comments (Recommended as home system)
6X	ISA, PCI	17"/.28	800/613-3355	3299	763	Latest version of soon-to-be-replaced "c" series features speedy Imagine128 video card.
4X	ISA, PCI	17"/.28	800/613-3355	3339	764	Quick corporate PC with built-in networking; we also like the P-166 version for about $200 more.
6X	ISA, PCI	15"/.28	800/223-6571	3268	765	Quality system also comes in Top 20–caliber P-100, P-120, P-150, and P-166 flavors.
4X	ISA, PCI	15"/.28	800/752-0900	3383	766	New line for the home office; nice design includes voice mail, business software.
6X	ISA, PCI	15"/.28	800/223-6571	3331	767	Fast SCSI version of Micron's reputable Millennia line is priced with an Iomega Jaz drive.
6X	ISA, PCI	15"/.28	800/888-6294	3384	768	Super price for fast P-166 with lots of expansion room; also ranks on Budget chart.
4X	ISA, PCI	15"/.28	800/752-0900	3362	769	Well-designed, reliable PC aimed at large corporations; P-133 version also a good choice.
6X	ISA, PCI	15"/.28	800/632-4636	3330	770	Good price for speedy PC with fast CD-ROM drive and big hard drive; P-166 version also solid.
6X	ISA, PCI	17"/.26	800/432-0486	3385	771	Power system climbs onto chart due to new low price; comes with a 28.8-kbps fax-modem.
4X	EISA, PCI	15"/.28	800/345-1518	3340	772	Solid PC's price drops $400, but you pay a premium for built-in SCSI, networking, and EISA slots.
6X	ISA, PCI	17"/.26	800/846-2000	3346	773	A fine value, but Gateway's overall service and system reliability could still improve.
6X	ISA, PCI	17"/.26	800/846-2000	3373	774	Loaded with extras like wavetable sound, but mediocre performance for a P-133.
8X	ISA, PCI	17"/.26	800/896-4898	3386	775	Bigger hard drive, new 8X CD-ROM drive, and improved reliability rating boost it onto chart.
4X	ISA, PCI	17"/.28	800/345-1518	3344	776	Mainstream version of Deskpro XL benefits from $530 price drop; no built-in networking, slow.
6X	ISA, PCI	17"/.27	800/340-7501	3387	777	Chip maker moves into PCs; fast and feature rich but expensive; limited expansion.
—	ISA, PCI	17"/.28	800/345-1518	3388	778	High quality, especially the Compaq monitor, but pricey and slow for a P-120; no CD-ROM drive.
4X	ISA, PCI	15"/.28	800/344-4825	3338	779	Fast; built-in networking; but it's expensive, and reports of DOA components are on the rise.
4X	ISA, PCI	15"/.28	800/999-1278	3372	780	$145 price drop on already cheap P-166; not enough data to rate reliability and service.
6X	ISA, PCI	17"/.26	800/856-6688	3389	781	Inexpensive P-166 comes with Matrox graphics board and 4MB of WRAM.
6X	ISA, PCI	15"/.25[4]	800/613-9963	3390	782	Ultrafast; low cost; quality components include 28.8-kbps fax-modem; support is sparse.

U.S. and Canada. Foreign orders are $15 for advance Top 20s, $8 for previous months' Top 20s, and $4 for individual reviews.
[3] Fewer than 100 Reliability and Service Monitor responses. Rating is based on responses for this company and the average of responses for all companies. No score is shown if we received fewer than 20 reliability or service responses.
[4] Stripe pitch.

For more information about all products in this table, circle reader service no. 911.

Top 20 Power Desktops

TWO OF THE PCs WE TESTED THIS MONTH EARN Best Buys on the Power Desktops chart: the $3299 Dell Dimension XPS P133c, a new version of the old favorite; and Hewlett-Packard's $3345 HP Vectra 500 Model 515MCx 5/166, a system designed for the small office/home office market. Other newly tested systems on this month's Power Desktops Top 20 chart include the $2499 Maximus Magna Media P-166, a low-cost speedster; and the $4639 Cyrix 6x86-P166+ PC and $2599 Sys Technology Performance C166+, both based on the new Cyrix 6x86-P166+ processor.

Two systems we tested in previous months make their way onto the chart for the first time. The $2599 Quantex QP5/133 SM-2 now comes with a bigger hard disk and a faster CD-ROM drive, while the $3199 Xi Computer P166MTower SP is now more reasonably priced and comes standard with a 28.8-kbps fax-modem.

Finally, Compaq recently slashed prices across its entire line of PCs, helping its systems hold their ground in the face of new competition.

Dell Dimension XPS P133c

NEW THIS MONTH

PROS: Fast, great graphics card, good reliability and service scores

CONS: High-end components add to price

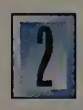
Dell's Dimension "c" line won't be around much longer. It will soon be replaced by the company's "s" series, a new line that will use an upgraded Pentium chip set and a faster kind of memory called SDRAM. Look for our first reviews of these new machines in coming months. In the meantime, you might want to invest in a Dimension XPS P166c, XPS P133c, XPS P120c, or XPS P100c while Dell still makes them. These mainstays of our Power Desktops chart are still terrific machines.

Of the group, the XPS P133c has the best combination of price, performance, and features. It's one of the fastest Pentium-133s we've tested, and at $3299 it costs only a little more than the similarly configured $3249 Pentium-120 and $3199 Pentium-100 Dimensions. We've also tested Dell's XPS P166c, which will be the first to be replaced by an "s" version. It's not much faster than the XPS P133c, but the PC we tested costs almost $400 more.

For this issue we tested a fresh batch of Dell's "c" machines to see if performance had improved since we last evaluated them. Except for the XPS P120c, whose PC WorldBench score climbed 5 points to 182, speed was about the same. These Dimensions came in desktop cases instead of the minitowers we've reviewed before. The desktop-style cases are fairly expandable—they hold five add-in cards and five storage devices. Two slots and two drives bays remained open in our test systems, which were configured with a Sound Blaster AWE32 sound card, a U.S. Robotics V.34 fax-modem, and a 6X Teac CD-ROM drive, among other components.

Dell Dimension P133c

These Dimensions also came with a better graphics card than before, which raised their prices. The Number Nine Imagine128 is the fastest graphics board we've tested to date. (Only its high price keeps it off our monthly Top 10 Graphics Boards chart.) But if you don't do a lot of high-end graphics work, you don't really need it. You can lop about $330 off the system's price by using a less powerful controller, such as the Number Nine 9FX Motion771.



Dell OptiPlex GXMT 5133

LAST REVIEWED: April 1996

PROS: Network ready, 17-inch monitor, good networked or on its own

CONS: Integrated video chip is outdated

The $3355 OptiPlex GXMT 5133 offers the best of two worlds: Solid, helpful networking features that support most standards; and full multimedia hardware, including a quad-speed CD-ROM drive and built-in 16-bit sound. What's more, our test configuration included a large high-quality monitor. Hook up to a network or don't—the choice is yours—but remember, you're paying extra for the network compatibility. The system's only drawback is the integrated Trio64 graphics chip with 2MB of DRAM. It's good for straightforward Windows programs, but if desktop video is important to you, you'll want an add-in card with built-in video acceleration. Several boards on our Top 10 Graphics Boards chart use the video-enabled Trio64V+ chip and faster EDO DRAM.

Micron P133 Millennia

LAST REVIEWED: March 1996

PROS: Speedy, loaded with features, full multimedia

CONS: Reliability and service scores down slightly this month

Each month Micron's P133 Millennia edges closer to a spot on our Budget Desktops Top 20 chart. This month the company shaves another $50 off the price of this well-built minitower. At $2649, the system remains a tremendous bargain while delivering the power that you need for today's most demanding applications, including the bundled Microsoft Office Professional. It's loaded with memory, secondary cache, and hard disk space, as well as a 6X CD-ROM drive. The low price is partly due to the inclusion of a 15-inch

This ad is for those of you who don't think backup is a good idea.

SeagateTapeStor makes backing up your important data and software ultimately easy and affordable.

Nobody in his right mind would jump out of a plane without a backup. So it stands to reason when you jump aboard your PC, you'll want to be confident your files have all been safely backed up.

A Seagate TapeStor drive is the best way to keep your data safe from disasters. With capacities of 800 MB or 3.2 GB, Seagate TapeStor solutions give you reliable and affordable backup.

Seagate TapeStor solutions are user friendly, easy to install and the software includes a scheduler. So you can set up your system to back up whatever files you want—whenever you want. Automatically.

Call 1-800-626-6637 for the name and location of a Seagate TapeStor dealer. So you can be sure your data won't take a dive.

Seagate

THE DATA TECHNOLOGY COMPANY

Seagate and the Seagate logo are registered trademarks of Seagate Technology, Inc. ©1996 Seagate Technology, Inc.

Circle 209 on reader service card

monitor instead of a 17-inch model. Micron sells this system with a Hitachi SuperScan 17-inch monitor for $300 more.

All the other Millennias we've tested are good values, too, like the $3048 P166 Millennia (reviewed in April) or the $2848 P150 Millennia (reviewed in May). We haven't tested Micron's Home MPC systems, but the vendor says they're the same as the Millennias but with more multimedia titles plus a modem that includes voice mail. Micron's scores for system reliability and service are down this month in our fax-back survey—readers report higher DOA and overall problem rates.

4 HP Vectra 500 Model 515MCx 5/166

NEW THIS MONTH

PROS: Intelligent design, good software bundle, full multimedia, reliable

CONS: Wimpy graphics subsystem, shorter standard warranty than corporate VL line

If you have a small business, you'll appreciate the $3345 HP Vectra 500. Thanks to good bundled software and a voice fax-modem, this system will meet most of your business needs right out of the box. A nice set of communications programs will have you faxing, receiving voice mail, and surfing the Net in no time. For day-to-day business tasks, it comes with the ClarisWorks 4.0 integrated suite and Lotus Organizer 2.1.

The Vectra 500's PC WorldBench score of 192 is good for a Pentium-166 machine. The only thing holding the system up is its integrated Trio64 graphics chip with 1MB of DRAM. You should look into upgrading to 2MB of graphics memory. If you want accelerated full-motion video, you'll also need a card with a newer chip.

HP Vectra 500

The Vectra 500 includes unique design features; most notably, cards are inserted parallel to the motherboard in a vertical riser plane. This unusual arrangement saves space as well as eliminates stress on the motherboard when you swap add-in cards.

The Vectra 500 line is aimed at the small office/home office market, while the Vectra VL line is aimed at large corporations, so these systems have different support policies. On the downside, Vectra 500s come with just a one-year standard warranty, but their tech support hours are longer than the VLs' and include Saturdays.

5 Micron P166 Millennia Plus

LAST REVIEWED: March 1996

PROS: Good performance, 2GB SCSI hard drive, 1GB Jaz removable storage drive

CONS: Expensive, just a 15-inch monitor

Although $4148 is a lot to pay for a PC, consider that the P166 Millennia Plus features a SCSI hard drive; full multimedia, including a 6X CD-ROM drive, sound, and speakers; and an Iomega Jaz drive. If you don't need the Jaz removable storage, you can shave $400 off the price. You may want to spend that savings on a larger display: More than any other Millennia we've tested, the Plus model deserves a 17-inch monitor for displaying more information.

6 Maximus Magna Media P-166

NEW THIS MONTH

PROS: Sturdy; very fast; loaded configuration includes sound, speakers, and CD-ROM drive

CONS: One-year parts warranty, unknown track record for service and reliability

The $2499 Maximus Magna Media P-166 is inexpensive enough for the Budget chart but powerful enough to make the Power Top 20. It achieves a high PC WorldBench score of 201 thanks to its 16MB of EDO RAM, 512K of pipeline-burst cache, and a whopping 2.1GB hard drive. This sturdy Pentium-166 minitower also includes a slew of quality components, ranging from a Matrox Millennium graphics card with 2MB of WRAM to a 6X Teac CD-ROM drive to a Zoom V.34 fax-modem.

Maximus

Maximus offers a lifetime warranty on labor, but parts are covered for only a year. At this time we don't have any fax-back data to rate the company's reliability and service, but anecdotal evidence indicates Maximus needs to improve in both areas, so buyer beware.

7 HP Vectra VL Series 4 5/166 MT

LAST REVIEWED: May 1996

PROS: Well designed; high-performance Matrox graphics card; three-year warranty standard

CONS: Graphics card deserves a 17-inch monitor, no bundled software

Although HP's reliability and service scores are a bit lower this month, it's hard to argue with the quality of the systems we've tested. This $3915 P-166 is fast and well built. For a little less money, check out the $3615 Vectra VL 4 5/133 (reviewed in March).

8 NEC PowerMate P133

LAST REVIEWED: March 1996

PROS: Good performance, 6X SCSI CD-ROM drive, roomy hard drive

CONS: Reliability and service scores down slightly this month

9 Xi Computer P166MTower SP

LAST REVIEWED: April 1996

PROS: Fast, wavetable sound card, 17-inch monitor, 6X CD-ROM drive

CONS: Limited support hours, scant feedback from readers regarding reliability and service

10 Compaq Deskpro XL 5133

LAST REVIEWED: March 1996

PROS: Sturdy, built-in network adapter, SCSI hard drive, good system reliability

CONS: Expensive despite big price drop to $4099

11 Gateway 2000 P5-133

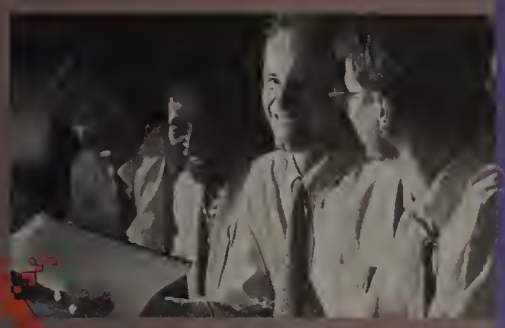
LAST REVIEWED: March 1996

PROS: Great price, solid performance, 17-inch monitor, roomy hard drive

CONS: Service score down slightly this month

One printer more features more options more work gets done

The Xerox DocuPrint 4517 desktop laser printer.



Starting at under $2,000.*

One printer, more solutions. The new DocuPrint 4517 network laser printer. With its innovative, modular design, and unsurpassed paper handling capabilities, the 4517 is designed to meet today's ever-changing work-group needs. All with a full one-year On-Site Service and our three-year Xerox Total Satisfaction Guarantee. Which means if you're not satisfied with the DocuPrint 4517, we'll replace it without charge with an identical model or one with comparable features and capabilities. For details, contact your reseller or call 1-800-34-XEROX or visit our web site: http://www.xerox.com. In Canada call 1-800-ASK-XEROX.

*Xerox DocuPrint 4517 [illegible] price [illegible] to [illegible]

Compatible with Microsoft Windows 95

yes NetWare Tested and Approved

XEROX®, The Document Company®, the stylized X, and DocuPrint 4517 are registered trademarks of XEROX CORPORATION. *Estimated street price (U.S.) for base model. Prices may vary.

Small footprint. Configure it any way you need.

Standard Configuration

1 Edge-to-edge printing
1200 x 600 dpi • 17 ppm

Optional Features

Add a 500-sheet output tray that separates jobs for faster retrieval. (Not shown)

2 Add a lockable mailbox that collates and organizes jobs. Also ensures confidentiality.

3 Add a 500-sheet paper tray.

Add a low-cost duplexer for two-sided printing. (Not shown)

4 Add another paper tray for nonstop printing. Total capacity: 1,350 sheets.

Add a feeder for up to 75 envelopes. (Not shown)

THE DOCUMENT COMPANY
XEROX

Circle 257 on reader service card

12 Gateway 2000 P5-133XL

LAST REVIEWED: June 1996

PROS: Good price, wavetable sound card, 17-inch monitor, 6X CD-ROM drive, speakers

CONS: Service score down slightly this month

13 Quantex QP5/133 SM-2

NEW THIS MONTH

PROS: Low price, new 2GB hard drive, 17-inch monitor, full multimedia, 28.8-kbps fax-modem

CONS: Low reliability and service scores

Although we tested the Quantex QP5/133 SM-2 under PC WorldBench back in March, the system didn't make the power chart. Today you pay less—$2599—and get more, including a spacious 2GB hard drive. And while Quantex's reliability and service scores are low for a company in the Power chart, they're an improvement from a month ago. It's too early to declare a trend, but the latest responses to our fax-back survey are decidedly more positive than in the past, and the company tells us it's taken steps to further bolster reliability and service.

Quantex

14 Compaq Deskpro 5133

LAST REVIEWED: March 1996

PROS: Big price cut to $3599, nice 17-inch monitor, excellent system reliability

CONS: Pricey and slow for a Pentium-133

15 Cyrix 6x86-P166+ PC

NEW THIS MONTH

PROS: Good performance, huge SCSI hard drive, nice graphics system

CONS: Expensive; crowded interior

Although Cyrix is a relative newcomer to the PC business, the company has shown it can build a good system. The 6x86-P166+ PC, based on the 133-MHz 6x86-P166+ CPU, is a powerful Windows 95 system with top-notch components. Its PC WorldBench score of 199 is not as high as that of other systems based on the same chip, but it's definitely in line with this PC's main competition—Pentium-166 PCs.

Cyrix

The $4639 Cyrix PC is expensive for a system with this level of power, especially considering that part of Cyrix processors' appeal is their cost savings over Pentiums. The high price is due to the system's huge 4GB SCSI hard drive and Adaptec Ultra SCSI controller. With a 2.1GB IDE drive, the same PC goes for about $1300 less and compares favorably in value to top-tier P-166s.

The Cyrix PC's other features are also impressive: 17-inch CTX monitor, Matrox Millennium graphics card, Mitsumi 6X CD-ROM drive, Sound Blaster AWE32 sound card, Cambridge SoundWorks speaker system with subwoofer, and Supra 28.8-kbps fax-modem. Unfortunately, all the built-in components make for a crowded interior, and you can't upgrade RAM without yanking boards.

As you'd expect, we don't have any data on Cyrix's PC business to gauge the company's reliability and service. Cyrix backs each PC with a standard three-year warranty and round-the-clock support. Because the systems aren't yet common, getting through to tech support is a breeze, and the staff is helpful.

16 Compaq ProLinea 5120

LAST REVIEWED: March 1996

PROS: Good 17-inch monitor, plenty of room for expansion, outstanding reliability

CONS: Expensive and sluggish for a P-120, no CD-ROM drive

17 Digital Celebris GL 5166ST

LAST REVIEWED: June 1996

PROS: Strong performance; integrated sound, video, and ethernet adapter

CONS: Pricey for a PC with just a 15-inch monitor

18 Polywell Poly 5166P8

LAST REVIEWED: May 1996

PROS: Fast, inexpensive, full multimedia, five-year labor warranty

CONS: Limited support hours

19 PerComp P166 Professional

LAST REVIEWED: May 1996

PROS: 4MB Matrox graphics card, wavetable sound card, 17-inch monitor

CONS: No reader feedback on reliability and service

20 Sys Technology Performance C166+

NEW THIS MONTH

PROS: Fast, inexpensive, fully loaded, first-class components, 28.8-kbps fax-modem

CONS: Poor documentation, sparse support policies, unknown record for service and reliability

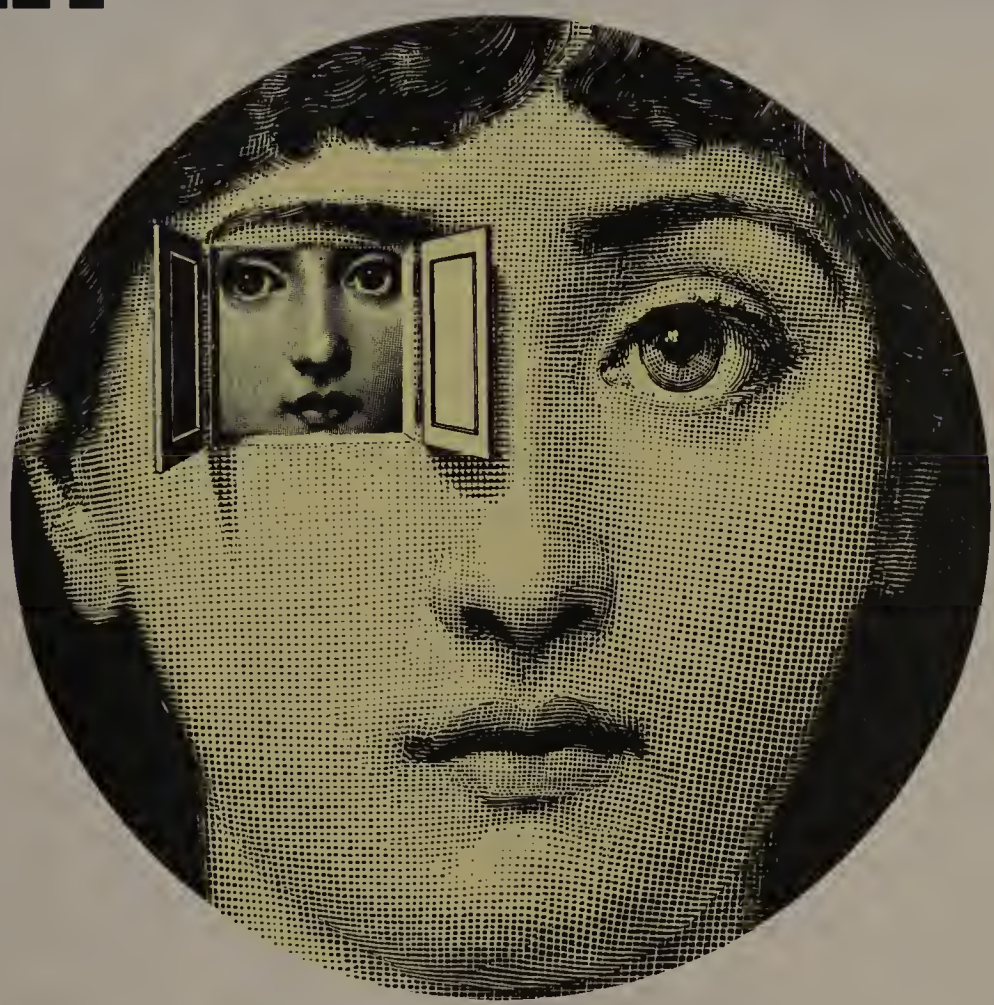
Sys's new Performance C166+ uses the Cyrix 6x86-P166+ and 16MB of RAM to achieve a PC WorldBench score of 208. That mark puts it among the five fastest systems we've tested. Even more impressive is its price. At $2599, the Performance C166+ delivers more for your dollar than almost any PC we've seen.

The high-quality 15-inch MAG Innovision DX15T monitor is a nice match for the Matrox MGA Millennium board with 2MB of WRAM. The wiring inside is jumbled, but the well-organized motherboard is easy to upgrade. Unfortunately, documentation is poor.

The system comes with a short one-year warranty, tech support hours are few, there's no toll-free support, and Sys offers no money-back guarantee.

Sys Technology

DIGITAL AND MICROSOFT ANNOUNCE A WAY TO HELP YOUR COMPANY MERGE WITH ITSELF.



It's called Windows-based enterprise computing. And it's designed to give your company the greatest competitive advantage of all: a unified vision. Imagine seamlessly sharing information—top-down, bottom-up, across your organization and beyond it—with the ease and familiarity of Windows.® And without worrying which computer happens to hold the data. It's no futurist fantasy—it's happening right now. The Alliance for Enterprise Computing delivers the powerful and integrated Microsoft® Windows NT™ and BackOffice™ platform, joined with Digital's systems and global service-and-support network. The result: dependable, flexible, open computing solutions. To align your company with its vision, call 1-800-332-4403, visit the Alliance Web site at http://www.alliance.digital.com or send e-mail to alliance@digital.com.

Microsoft® digital™

ALLIANCE

FOR ENTERPRISE COMPUTING

ABX

©1996 Digital Equipment Corporation. Digital and the DIGITAL logo are trademarks of Digital Equipment Corp. Microsoft, the Microsoft logo and Windows are registered trademarks and Windows NT and BackOffice are trademarks of Microsoft Corporation. Artwork ©Fornasetti/Immaginazione

Circle 82 on reader service card

THE PC WORLD TOP 20

BUDGET DESKTOPS

1 **Dell Dimension P100t**
High quality, low price.

	Last month	Months on chart	Last reviewed	Overall rating [1]	PC WorldBench score	Reliability/ service rating	Price	CPU	RAM (MB)	Hard drive (MB)
1 Dell Dimension P100t	–	1	current	93	173	77/77	$1879	Pentium-100	16	1600
2 Vektron Multimedia P-100	2	6	Mar 96	86	171	[3]	$1695	Pentium-100	16	2100
3 Quantex QP5/100 M-3	8	4	Apr 96	85	167	63/63	$1849	Pentium-100	16	1600
4 Gateway 2000 P5-120	–	6	Mar 96	85	176	68/69	$2099	Pentium-120	16	1624
5 Robotech Cobra XLT P-133	–	1	current	84	189	[3]	$2199	Pentium-133	16	1280
6 Netis N5133DPS	–	2	May 96	84	185	[3]	$1998	Pentium-133	16	1624
7 Micro Express MicroFlex-PCI/5133	16	4	Apr 96	84	190	[3]	$1999	Pentium-133	16	1624
8 Dell OptiPlex GL+575	6	3	Mar 96	84	121	77/76	$2111	Pentium-75	16	540
9 Tempest Pentium Giga Media P5-100	4	7	Mar 96	83	132	[3]	$1720	Pentium-100	16	1270
10 Micro Express MicroFlex-686/P120+	–	1	current	83	181	[3]	$1899	Cx6x86-P120+	32	1280
11 Maximus Magna Media P-166	–	1	current	82	201	[3]	$2499	Pentium-166	16	2140
12 Diamond OfficeMate P5120	–	1	current	82	164	[3]	$1645	Pentium-120	16	1624
13 Compaq ProLinea 575e	11	3	May 96	82	86	76/71	$1599	Pentium-75	8	630
14 XI P133MTower SP	–	1	current	82	193	[3]	$2349	Pentium-133	16	1280
15 Polywell Poly 4120P8	18	7	Mar 96	81	73	[3]	$1495	AmDX4-120	8	1080
16 DTK Quin 54M/P100	3	5	Mar 96	81	148	68 [3]/[3]	$2050	Pentium-100	16	1080
17 HiQ Saturn Station	14	2	Jun 96	81	190	[3]	$2215	Pentium-166	16	1625
18 Austin PowerPlus 100	–	2	Mar 96	81	147	63 [3]/[3]	$2099	Pentium-100	16	850
19 Acma zPower 100	–	1	current	81	131	[3]	$2095	Pentium-100	8	1280
20 CompuTrend Premio 5x86-100	10	6	Mar 96	81	126	[3]	$1549	Cx5x86-100	16	1080

BEST BUY

[1] Percent contribution to overall rating: price (25); reliability (25); features (20); PC WorldBench score (15); service and support (15).
[2] To order fax copies of system reviews, call 800/434-4495 from a touch-tone phone and use your credit card. You can order next month's reviews in advance: Power Desktop, Budget Desktop, or Notebook PCs Top 20 charts and capsule reviews ($9.95, available June 26). You can also order a previous month's Top 20 chart with capsule reviews plus Features Comparison and Test Report ($4.50) and Individual capsule reviews with Feature Comparison and Test Report ($1.50 each). Prices effective for the

2 **Vektron Multimedia P-100**
Stretching a buck even further.

3 **Quantex QP5/100 M-3**
Beefed-up hard drive, CD-ROM.

4 **Gateway 2000 P5-120**
Lots of speed for the money.

5 **Robotech Cobra XLT P-133**
Practically a flat-out steal.

CD-ROM drive	Bus slots	Monitor size/ dot pitch	Vendor contact number	Fax reprint number [3]	Reader service no.	Comments (Recommended as home system)
6X	ISA, PCI	15"/.28	800/613-3355	3391	743	Heir apparent to P75t offers quality and speed at a good price; no speakers or modem.
6X	ISA, PCI	15"/.25	800/725-0026	3325	744	Upgraded hard drive and CD-ROM drive—at no extra cost. Still, Vektron lacks a support record.
8X	ISA, PCI	15"/.28	800/896-4898	3353	745	$50 price drop, more storage, improved system reliability move it to Best Buy ranks.
6X	ISA, PCI	15"/.25	800/846-2000	3392	746	$150 price drop moves well-built P-120 into Best Buy ranks ahead of impressive P-75 version.
6X	ISA, PCI	17"/.28	800/255-2215	3393	747	Fast, inexpensive PC for the home office, but documentation is spotty and support is weak.
4X	ISA, PCI	15"/.28	800/577-7526	3394	748	Price drop brings P-133 in under $2000; well configured, but reliability and service unknown.
4X	ISA, PCI	15"/.28	800/989-9900	3361	749	Fast, inexpensive system for under $2000; limited returns suggest below-average reliability.
4X	ISA, PCI	15"/.25	800/613-3355	3354	750	Only network-ready PC on budget chart, good business machine priced with small hard drive.
4X	ISA, PCI	15"/.28	800/818-5163	3356	751	Good price for multimedia PC with this much RAM and hard drive space; very expandable.
4X	ISA, PCI	17"/.28	800/989-9900	3395	752	Powerful system uses Cyrix chip to keep price down and adds extra RAM, but support in doubt.
6X	ISA, PCI	15"/.28	800/888-6294	3396	753	Super price for fastest budget PC; lots of room for expansion; also ranks on Power chart.
4X	ISA, PCI	15"/.28	800/989-7253	3397	754	Inexpensive no-frills business machine lacks sound and speakers.
—	ISA, PCI	15"/.28	800/345-1518	3366	755	$155 price drop on a solid, simple business machine; extras like a CD-ROM drive are optional.
6X	ISA, PCI	17"/.26	800/432-0486	3398	756	Big tower case, one of the most expandable we've seen; good features; limited tech support.
4X	ISA, PCI	15"/.28	800/999-1278	3357	757	$100 price drop keeps aging PC around; with outdated chip, it's by far the slowest here.
6X	ISA, PCI	15"/.28	800/289-2385	3351	758	Good value, but increasingly negative feedback for system reliability hurts its standing.
6X	ISA, PCI	15"/.28	800/827-5836	3379	759	Exceptionally low price for a multimedia P-166; forced down the chart by hot newcomers.
4X	ISA, PCI	15"/.28	800/752-1577	3399	760	Solid budget PC; decline in feedback makes reliability and service hard to gauge.
4X	ISA, PCI	15"/.28	800/786-6888	3400	761	Full-featured design includes two built-in PC Card slots; performance sluggish for a P-100.
4X	ISA, PCI	15"/.28	800/677-6477	3323	762	P-75 speed at a 486 price; fully loaded; limited support options make it difficult to get help.

U.S. and Canada. Foreign orders are $15 for advance Top 20s, $8 for previous months' Top 20s, and $4 for individual reviews.
[3] Fewer than 100 Reliability and Service Monitor responses. Rating is based on responses for this company and the average of responses for all companies. No score is shown if we received fewer than 20 reliability or service responses.

For more information about all products in this table, circle reader service no. 912.

Top 20 Budget Desktops

THE BUDGET CHART FEATURES SEVERAL NEW entries, including the top-ranked Dell Dimension P100t. At just $1879, it has ample speed, features, and quality for entry-level users. The $2199 Robotech Cobra XLT P-133 also claims a Best Buy, based on what it delivers for the money—P-133 speed and a 17-inch monitor. Other new entries include the $1899 Micro Express MicroFlex-686/P120+, based on the new Cyrix processor, and the $2499 Maximus Magna Media P-166, which also qualifies as a Top 20 *power* desktop.

Price cuts propel the $1998 Netis N5133DPS and the $1999 Micro Express MicroFlex-PCI/5133 up the chart to numbers six and seven, respectively. Meanwhile, Quantex has upgraded the hard disk and CD-ROM drive in its $1849 QP5/100 M-3, earning it a Best Buy.

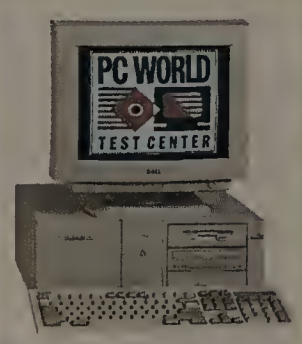
Dell Dimension P100t

NEW THIS MONTH

PROS: Fast, inexpensive, highly upgradable

CONS: No speakers, no full-motion video acceleration

The $1879 Dimension P100t is a perfect entry-level PC for business users on a tight budget. It's fast, well built, and easy to upgrade. With a PC WorldBench score of 173, the Dimension P100t is not only one of the fastest P-100s, it also delivers some of the best performance for the money of all the systems we've seen, regardless of CPU. However, don't count on it to be the perfect multimedia PC. Although the P100t comes with a 16-bit sound card, speakers are optional; and despite its 2MB of graphics memory, the integrated Trio64 graphics chip can't speed up full-motion video clips. If your budget permits, think about spending an extra $250 for some basic speakers and a 2MB video-enabled board. Even with that added cost, the Dimension P100t would rank at the top of our Budget chart.



Dell Dimension P100t

The Dimension P100t has a standard desktop design, with the on/off button placed to one side so you can't confuse it with the floppy eject button. The interior is clean and accessible, but you might want to move the sound card closer to the CD-ROM drive so the wire that connects the two won't interfere with other add-in cards. Overall, there's room for five more cards and two additional storage devices.

This model is priced with a three-year parts warranty, but as of press time Dell's standard warranty was one year (an upgrade to three years costs $199). Our fax-back survey indicates Dell's problem rate has fallen recently, which accounts for the slight rise in its reliability score. Readers continue to be happy with Dell service.

Vektron Multimedia P-100

LAST REVIEWED: March 1996

PROS: Ultralow price, big 2GB hard drive, 6X CD-ROM drive

CONS: One-year warranty, no weekend support

The $1695 Vektron Multimedia P-100 is a great deal that keeps getting better. Vektron has installed a 2GB hard drive and 6X CD-ROM drive in this speedy P-100 minitower without increasing cost. However, we only recently added Vektron to our fax-back survey, so we don't have enough feedback to gauge the company's reliability and service. When we called tech support, a recorded message encouraged us to fax or e-mail our questions to the company. Times on hold can be long. If you're good with PCs and can fix problems if they arise, though, Vektron deserves your consideration. And if you're trying to stretch a buck as far as it will go, you can't do better than the Multimedia P-100.

Quantex QP5/100 M-3

LAST REVIEWED: April 1996

PROS: Good performance, full multimedia, fax-modem, 8X CD-ROM drive

CONS: Reliability score, though improved, is still mediocre

The $1849 QP5/100 M-3, a family-oriented multimedia system, comes with a bunch of games, PerfectWorks integrated software, and several online start-up kits. It's a good choice for home offices that also use the PC for entertainment. New features like a 1.6GB hard drive, an 8X CD-ROM drive, and a 28.8-kbps fax-modem with voice mail boost this minitower near the top.

If you want a little extra power, consider the $2099 QP5/120 M-4. We tested it this month for the first time and found it fast, with the same high-quality design as the QP5/100 M-3. Although our M-4 test unit came with a 15-inch monitor, a 1.6GB hard drive, and a 6X CD-ROM, Quantex has since upped the ante by offering the M-4 line standard with a 17-inch monitor, a 2GB hard drive, and an 8X CD-ROM. These changes are likely to increase price slightly, so call the vendor for the latest figure.

Gateway 2000 P5-120

LAST REVIEWED: March 1996

PROS: Good performance, 6X CD-ROM drive, Microsoft Office Professional Edition

CONS: No sound

Thanks to a price drop of $150 and a bigger standard hard drive of 1624MB, the P5-120 emerges as Gateway 2000's best budget PC. At $2099 it's an excellent deal, but you'll need to cough up another

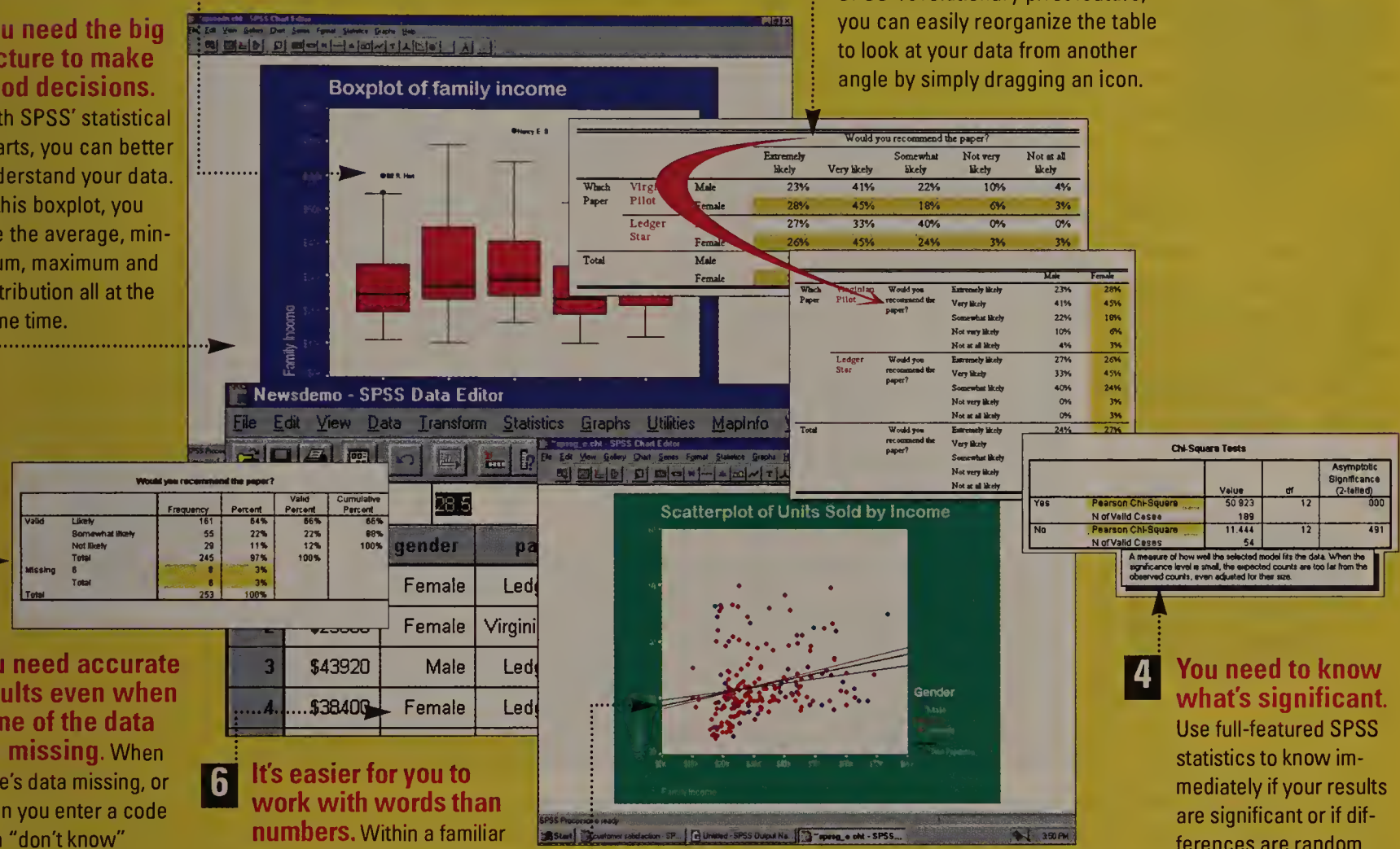
7 secrets you need to know about your data

All new for Windows 95 & NT 3.51!

1 You need the big picture to make good decisions. With SPSS' statistical charts, you can better understand your data. In this boxplot, you see the average, minimum, maximum and distribution all at the same time.

2 You need to know when there's a problem with your data. SPSS helps you spot data entry errors or unusual data points that you may want to leave out of your analysis — or look at more closely.

3 You need to look at the data more than one way. When you create a report, what you see often leads to more questions. With SPSS' revolutionary pivot feature, you can easily reorganize the table to look at your data from another angle by simply dragging an icon.



4 You need to know what's significant. Use full-featured SPSS statistics to know immediately if your results are significant or if differences are random. If your stats are rusty, click "What's This?" to get explanations, definitions and rules of thumb for statistics or results.

5 You need to separate the apples from the oranges. SPSS lets you quickly and easily run reports and graphs for different groups so you can look at them separately or compare them.

6 It's easier for you to work with words than numbers. Within a familiar row-and-column setting, SPSS lets you work with words instead of confusing codes — and still do calculations. Your labels are automatically applied to your graphs and reports for clearer, faster presentations.

7 You need accurate results even when some of the data are missing. When there's data missing, or when you enter a code for a "don't know" answer, SPSS can adjust calculations accordingly.

"It's fast, powerful, robust and a joy to use."- *Windows Sources, April 1996*

"The premiere statistical-analysis package for Windows 95." - *PC Computing, April 1996*

"Users will want this program for extending analyses when their spreadsheets run out of steam."- *PC Magazine, April 1996*

SPSS gives you Real Stats. Real Easy. SPSS is a complete tool kit of easy-to-use statistics, graphs and reports that will help you unlock the secrets hidden in your data. Enter your data or directly import it from spreadsheets, databases or ASCII files. SPSS is used for:

- Survey research
- Marketing and sales analysis
- Quality improvement
- Research of all types

We're not saying you should give up your spreadsheet or database. But, when you're ready to go beyond simple summaries and basic row-and-column math to get the information you really need, you're ready for SPSS 7.0 for Windows. **Circle 253 on reader service card**

The headquarters of SPSS Inc. is in Chicago, with over 20 offices and 60 distributors worldwide

Call 1 (800) 543-5837
or fax 1 (800) 841-0064
Outside the United States:
call +1 (312) 329-2400
or fax + 1 (312) 329-3668

Visit our site on the World Wide Web:
http://www.spss.com
or e-mail:
sales@spss.com

A5837

SPSS
Real Stats. Real Easy.

$100 for a sound card and speakers. Add still another $149 if you want a 28.8-kbps fax-modem. Other good Gateway PCs for people on a budget are the highly affordable $1594 P5-75 (reviewed in March), and the fully configured $2229 P5-100 Family PC (reviewed in April).

5 Robotech Cobra XLT P-133

NEW THIS MONTH

PROS: Fast, good price, full multimedia, 17-inch monitor, 28.8-kbps Boca fax-modem

CONS: Limited support hours, poor documentation, unknown record for service and reliability

The $2199 Robotech Cobra XLT P-133 is an office workhorse. In addition to plenty of memory and hard drive space, it has a fast graphics system for running business programs. Its Number Nine 9FX Motion331 video-enabled card with 2MB of EDO DRAM is paired with a good Cobra 17-inch monitor. A 6X Mitsumi CD-ROM drive and Sound Blaster 16 sound card handle the multimedia duties.

The Cobra XLT P-133's PC WorldBench score of 189 is high for its processor class, equaling the marks of some of the Pentium-166 systems that we've tested. The minitower's major drawbacks are its poor documentation and internal cable clutter. We do not have enough fax-back data to rate the quality of Robotech's reliability and service, but spot calls to the company's technical support line have yielded disappointing results. Phone support is limited to weekday business hours. The system itself is a winner at a low price, but you take a chance when ordering from a relatively small vendor like Robotech.

Robotech

6 Netis N5133DPS

LAST REVIEWED: May 1996

PROS: Under $2000, good PC WorldBench score, lots of features

CONS: One-year parts warranty, no feedback to gauge reliability and service

In addition to this bargain-basement $1998 Pentium-133, other Netis desktop systems that we've tested rate well if you're looking for a budget system. Among them are the $1911 Netis N5100 Media (reviewed in May) and the $1980 Netis N5120 Media (reviewed in April).

7 Micro Express MicroFlex-PCI/5133

LAST REVIEWED: April 1996

PROS: Fast, low price for a P-133, full multimedia

CONS: Tech support hard to reach, requires toll call after business hours

8 Dell OptiPlex GL+575

LAST REVIEWED: March 1996

PROS: Intelligent design, network ready, good P-75 performance, top-notch support

CONS: Pricey for a Budget Top 20 P-75, small hard drive, limited expandability

9 Tempest Pentium Giga Media P5-100

LAST REVIEWED: March 1996

PROS: Good price, full multimedia, fax-modem

CONS: Slow for a P-100, no fax-back data to gauge reliability and service

10 Micro Express MicroFlex-686/P120+

NEW THIS MONTH

PROS: Low price, high performance, 17-inch monitor

CONS: Skimpy documentation, clunky design, tech support hard to reach

The boxy $1899 Micro Express minitower is based on the speedy Cyrix 6x86-P120+ processor running at 100 MHz. Cyrix processors continue to impress us with their speed in handling business applications. With a PC WorldBench score of 181, this MicroFlex is on a par with far more expensive Pentium-120 and Pentium-133 PCs. Micro Express took the money it saved on the CPU and put it toward 32MB of RAM, adding to the system's speed. The unit also comes with a 17-inch monitor and a professional-level ATI Graphics Pro Turbo video card with 2MB of VRAM. Unfortunately, Micro Express skimps on documentation and application software. In addition, the system's interior is extremely cluttered, and its keyboard feels particularly cheap and poorly built.

Micro Express P120+

We don't have much reader feedback on Micro Express, but what we do have indicates that its PCs have below-average reliability. Phone support after business hours requires a toll call. In our experience, getting through can be near impossible. In its favor, Micro Express has a 30-day money-back guarantee and a two-year warranty. If you want the biggest bang for your buck, don't ignore the MicroFlex-686/P120+.

11 Maximus Magna Media P-166

NEW THIS MONTH

PROS: Fastest budget PC; sturdy; loaded configuration includes sound, speakers, and CD-ROM

CONS: One-year parts warranty, unknown track record for service and reliability

At just $2499, the Maximus Magna Media P-166 is extremely easy on the wallet. With a PC WorldBench score of 201, it's also quite powerful. In fact, with its stellar combination of speed and features, the Magna Media P-166 almost earns a Best Buy on the *Power* chart. For a complete write-up, check its entry in the Power Desktops section.

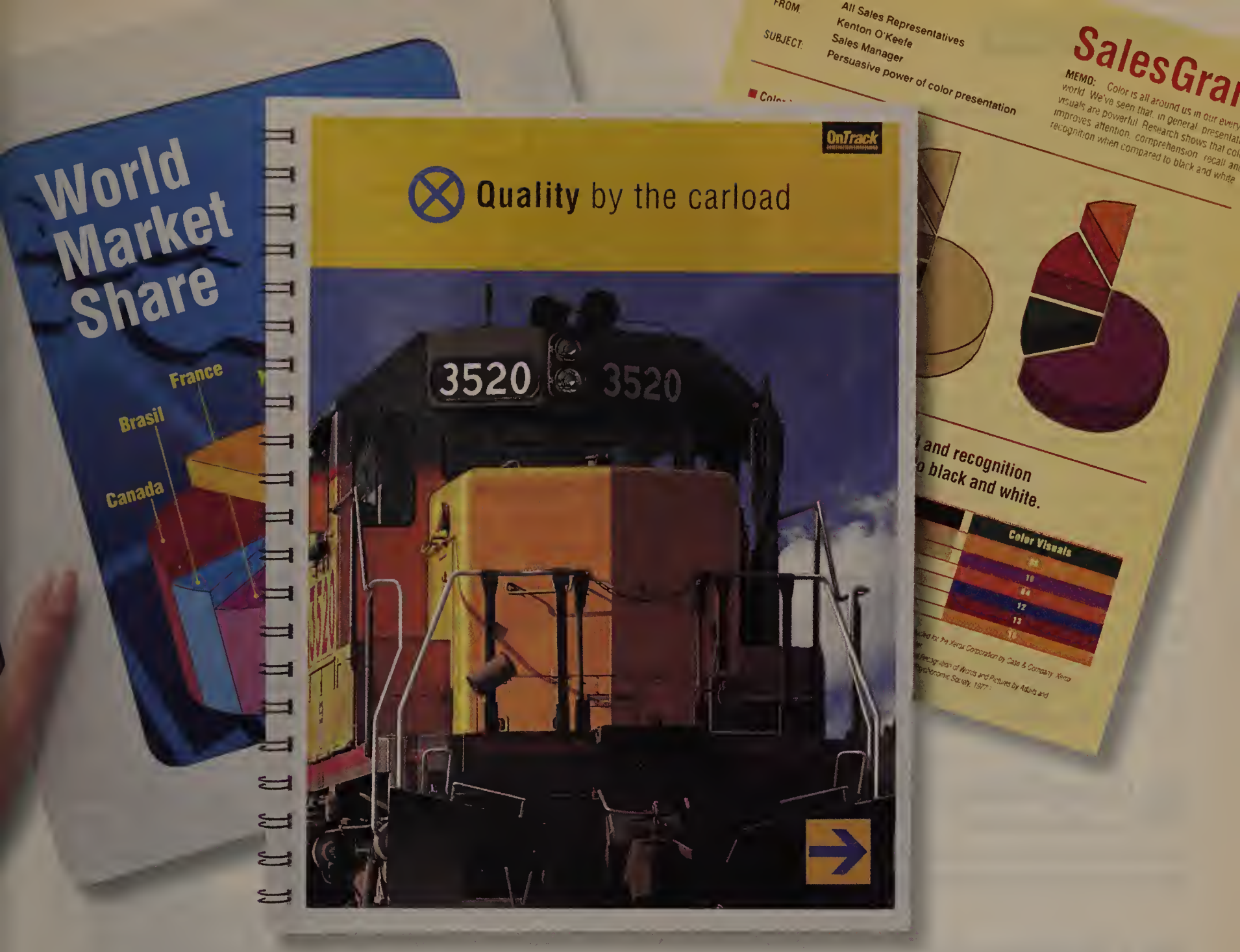
12 Diamond OfficeMate P5120

NEW THIS MONTH

PROS: Low price, sturdy design, fully loaded

CONS: No sound card, no application software, poor documentation

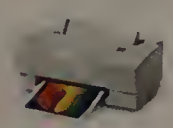
The Diamond OfficeMate P5120 comes with just about everything you want in a PC—plenty of memory, a big hard drive, and a



Color is color, until you print at full throttle.

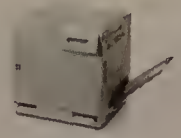
Power up a Phaser® 340 color printer. And all your work will be right on time, right on the money. It prints 4 color pages per minute at 11¢ per color page. So everyday reports, memos and overheads are all suddenly practical. At 600 dpi. With PostScript™. And for any size workgroup. The Phaser 340 is reliable, affordable and network manageable. It supports PCs, workstations and Macs. And it's supported by Tektronix, a Fortune 500 manufacturer, who makes all the best solutions for color across the enterprise. **Tektronix Phaser Printers**

Adobe PostScript


Phaser 140

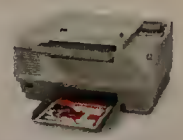
Phaser 240

NEW Phaser 340


NEW Phaser 550

Phaser 440

NEW Phaser 480X


Phaser 300i

Call 800-835-6100 Ext. 1292.
http://www.tek.com/CPad?1292

Tektronix

Circle 124 on reader service card

© 1995 Tektronix, Inc. All rights reserved

fax-modem—but you wouldn't know from its price tag. Similarly configured Pentium-120s typically cost upwards of $2000, but the OfficeMate goes for just $1645.

About all that's missing is a sound card. And you probably won't use this PC to connect to the World Wide Web because the included modem does just 14.4 kbps (you really need a 28.8-kbps modem for surfing the Web). But for sending e-mail, writing proposals, and keeping track of information, the OfficeMate fits the bill.

Diamond

Although the P5120's PC WorldBench score of 164 is average for a Pentium-120, it's high for a PC in this price range. The combination of an Impression 15-inch monitor and a Diamond Stealth64 Video 2201XL graphics card (ranked third on this month's Top 10 Graphics Boards chart) is good for mainstream applications. However, we were disappointed that the system doesn't come with application software. Also, its documentation leaves a little to be desired.

Other Diamond PCs that score well in the budget category are the $1499 DT-100 (reviewed in March) and the $1895 DT Super-150 (tested in June).

13 Compaq ProLinea 575e

LAST REVIEWED: May 1996

PROS: Well built, low price, great record for reliability

CONS: Skimpy configuration, slow due to lack of cache

14 Xi P133MTower SP

NEW THIS MONTH

PROS: Fast, good price, 17-inch monitor, 6X CD-ROM drive, highly expandable

CONS: Limited tech support hours, unknown track record for service and reliability

We tested this system back in March; now a $150 price drop puts the $2349 tower on the Budget Desktops chart. With a PC WorldBench score of 193, it's very fast for a Pentium-133 PC. It's also one of three Top 20 budget desktops to include a 17-inch monitor (the other two are from Robotech and Micro Express). The Xi system's seven free drive bays and five free add-in slots are also highly commendable. We haven't learned much about Xi Computer yet from our reader fax-back survey. The company offers a three-year warranty, but technical support is confined to weekday business hours.

Xi Computer

15 Polywell Poly 4120P8

LAST REVIEWED: March 1996

PROS: Dirt cheap, full multimedia

CONS: Slow; outdated AmDX4-120 CPU; poor monitor; just 8MB of RAM

16 DTK Quin 54M/P100

LAST REVIEWED: March 1996

PROS: Good upgradability, full multimedia, 6X CD-ROM drive

CONS: Some cable clutter, lower reliability score drops ranking

17 HiQ Saturn Station

LAST REVIEWED: June 1996

PROS: Great price for a P-166 PC, 6X CD-ROM drive, good expandability

CONS: So-so monitor, unknown track record for service and reliability

18 Austin PowerPlus 100

LAST REVIEWED: March 1996

PROS: Nice design, full multimedia, fax-modem, great system manual

CONS: Mediocre score for reliability, smallish 850MB hard drive

19 Acma zPower 100

NEW THIS MONTH

PROS: Two PC Card slots, full multimedia, 28.8-kbps fax-modem, well built

CONS: Sluggish performance for a P-100

Even low-cost PCs can surprise you with unexpected features. The $2095 Acma zPower 100 comes with a frill we don't see very often in desktop PCs—a pair of PC Card slots. If you use both a notebook and a desktop, the slots are perfect for exchanging data. Serial cable or infrared links can be cumbersome and require that both systems be in the same location when you want to move files.

Acma

Overall, the zPower 100 is well designed. Its case is sturdy and nicely styled, its motherboard clean and uncluttered. The graphics system is solid but not spectacular. The Acma system's 15-inch Impression 5 monitor and Diamond Stealth64 Video 2201 graphics card will serve you well for business applications, although they're not suited for high-end desktop publishing or image editing. Unfortunately, the zPower 100's PC WorldBench score of 131 is below average for a Pentium-100, likely due to its minimal 8MB of RAM.

To get you up and running, Acma bundles a few software programs, including Microsoft Works and Encarta, and we were pleased with the documentation. The system warranty covers parts for three years and labor for one, and you get a year of free on-site service. We've gotten very little feedback on Acma's reliability and service, though, and we can't determine how well the company follows through on its support policies.

20 CompuTrend Premio 5x86-100

LAST REVIEWED: March 1996

PROS: Low price for a loaded system with multimedia; performs like a P-75

CONS: Limited support hours, no toll-free or weekend support

Not all 800 pound gorillas are what they're cracked up to be.

If you need a scanner that combines high performance and maximum value, may we suggest a little head-to-head competition. UMAX vs HP? Unfair comparison? Maybe for them. UMAX has a reputation for offering advanced, award-winning scanners at prices that make good business sense. Plus, our software bundles are unmatched, even by the big boys. So why monkey around? Compare the UMAX Vista S-12 with the HP ScanJet 4c and decide for yourself.

Compare	UMAX Vista S-12	HP Scanjet 4c
Image editor software	✔ Adobe Photoshop Full	Photopaint
Presentation software	✔ ASAP Word Power	None
Maximum DPI	✔ 9600	2400
Bit depth	✔ 33-bit[1]	30-bit
Scanning speed (5" x 7" color photo)	✔ 18 sec.	42 sec.
Lamp	✔ Cold cathode - lasts longer	Fluorescent
Tech support	✔ Toll free	No 800 number
Price [2]	✔ $821	$ 912

UMAX Vista S-12

UMAX

toll free **800-859-2728**

http://www.umax.com

HP Scanjet 4c

Circle 250 on reader service card

[1] 33-bit equivalent with the analog gamma correction. [2] Average street price from sampled advertisements in Computer Shopper May, 1996.

© Copyright 1996 UMAX Technologies, Inc. HP and HP Scanjet 4c are registered trademarks of Hewlett Packard, Inc. Adobe Photoshop is a registered trademark of Adobe, Inc. ASAP Word Power is a registered trademark of Software Publishing Corp. All other trademarks are the property of their respective owners.

THE PC WORLD TOP 20

NOTEBOOK PCs

1 Gateway 2000 Solo S5-120XL
Can't cram more into a notebook.

	Last month	Months on chart	Last reviewed	Overall rating [1]	PC WorldBench score	Reliability/ service rating	Price	CPU	RAM (MB)	Hard drive (MB)	Multi-media
POWER SYSTEMS											
1 Gateway 2000 Solo S5-120XL	–	1	current	92	153	74/65 [4]	$5599	Pentium-120	40	1358	sound/CD
2 Toshiba Tecra 700CT	4	2	Jun 96	91	141	85/80	$5333	Pentium-120	16	1215	sound/CD
3 Toshiba Satellite Pro 400CDT	5	7	Mar 96	91	124	85/80	$4458	Pentium-75	16	810	sound/CD
4 Dell Latitude XPi P120ST	3	2	Jun 96	90	138	79/70 [4]	$4299	Pentium-120	16	810	–
5 WinBook XP5 P120	1	4	Apr 96	88	146	58/74	$3499	Pentium-120	16	1295	sound
6 AST Ascentia J30	–	1	current	87	117	70/68 [4]	$3299	Pentium-100	8	810	sound
7 Toshiba Portégé 610CT	7	6	Mar 96	87	99	85/80	$3949	Pentium-90	8	720	sound
8 Texas Instruments TravelMate 5100	10	3	Mar 96	84	125	64 [4]/[4]	$3899	Pentium-90	16	1160	sound
9 NEC Versa 4080H	9	4	Apr 96	84	132	71/[4]	$5474	Pentium-120	16	1080	sound/CD
10 IBM ThinkPad 760C	6	3	May 96	83	121	68/76	$6184	Pentium-90	16	720	sound
BUDGET SYSTEMS											
1 Toshiba Satellite 100CS	2	2	Jun 96	91	87	85/80	$1999	Pentium-75	8	540	–
2 Toshiba Satellite T2130CS	3	5	Mar 96	91	65	85/80	$1599	DX4-75	8	503	–
3 Toshiba Satellite T2130CT	–	1	Jun 96	89	66	85/80	$2099	DX4-75	8	503	–
4 Dell Latitude XPi P75D	4	2	Mar 96	87	106	79/70 [4]	$2499	Pentium-75	16	540	–
5 Mega Image MegaBook 880	5	2	Jun 96	85	118	[4]	$2395	Pentium-90	16	543	sound
6 Sharp PC 3020	8	2	Jun 96	83	79	[4]	$1799	Cx5x86-100	8	500	–
7 AST Ascentia 950N	10	3	May 96	82	83	70/68 [4]	$2455	Pentium-75	8	810	sound
8 ZDS Z-Note MX	–	1	current	80	91	[4]	$2199	Pentium-75	8	540	–
9 WinBook XP5 P75	11	1	Jun 96	79	90	58/74	$2399	Pentium-75	8	543	sound
10 MPC TouchNote 1000	–	2	Mar 96	77	74	62/64	$1995	Pentium-75	8	518	sound

BEST BUY

[1] Percent contribution to overall rating for power notebook: PC WorldBench score (22); reliability (22); features and design (16); price (14); service and support (10); battery (8); weight (8). Percent contribution to overall rating for budget notebooks is the same except for price (22) and PC WorldBench score (14). [2] CA=color active, CD=color dual-scan, CP = color passive. [3] To order fax copies of system reviews, call 800/434-4495 from a touch-tone phone and use your credit card. You can order next month's reviews in advance: Power Desktop, Budget Desktop, or Notebook PCs Top 20 charts and capsule reviews ($9.95, available June 26). You can also order a previous month's Top 20 chart with capsule

2 **Toshiba Tecra 700CT**
The Rolls Royce of portables.

1 **Toshiba Satellite 100CS**
Pentium power on a tight budget.

2 **Toshiba Satellite T2130CS**
Quality doesn't usually come this cheap.

Weight (pounds)	Battery life (hours)	Screen type/ size [2]	Vendor contact number	Fax reprint number [3]	Reader service no.	Comments
8.8	5:40	CA/10.4"	800/846-2000	3758	783	With all that RAM, it's a high-end desktop that fits in your briefcase; it runs for hours.
10.4	4:43	CA/11.3"	800/457-7777	3751	784	The best in Toshiba's new high-end line; big bright screen; dual-scan model also a good buy.
9.0	4:21	CA/10.4"	800/457-7777	3728	785	Fast notebook is perfect as your only PC, 410CDT model also is impressive.
7.4	4:43	CA/10.4"	800/613-3355	3750	786	Good price for a super-VGA P-120, even though it lacks multimedia; P90ST costs $500 less.
7.4	6:19	CA/10.3"	800/468-2162	3736	787	Great deal, fast; nice keyboard; for $200 less, check out the P-90 version.
6.6	5:12	CA/10.4"	800/876-4278	3759	788	Sturdy, lightweight road warrior might benefit from an extra 8MB of RAM.
6.4	5:09	CA/9.5"	800/457-7777	3752	789	One of few subnotes that have caught on; nice screen, relatively comfortable keyboard.
7.4	5:06	CA/10.4"	800/848-3927	3714	790	Pricey for a P-90 notebook; not enough data to gauge recent reliability and service.
8.2	3:35	CA/10.4"	800/632-4636	3741	791	Costs a lot and has short battery life, but it's a good desktop replacement.
8.2	5:09	CA/12.1"	800/772-2227	3747	—	Expensive system performs well; big display, long battery life, but reliability score declines.
7.6	3:35	CD/10.4"	800/457-7777	3754	792	Low price, Pentium processor, high reliability rating—a perfect first notebook.
7.2	3:01	CD/10.4"	800/457-7777	3744	793	The logical second choice if you want to spend less and don't mind slower performance.
7.2	5:29	CA/10.3"	800/457-7777	3760	794	Active-matrix version of no. 2 Best Buy runs for a long time.
7.4	3:28	CD/10.3"	800/613-3355	3713	795	Fast, well-built budget notebook from a reliable vendor.
7.4	3:06	CA/10.3"	800/250-1876	3755	796	Low price for a fast notebook with active screen; reliability and service are unknowns.
7.2	4:28	CD/10.4"	800/237-4277	3757	797	Low-cost alternative to Pentium-75 notebooks features long battery life, good screen.
7.2	5:11	CA/10.3"	800/876-4278	3729	798	Best battery life you can get for the money; slow for a P-75 budget notebook.
7.2	2:02	CD/10.4"	800/582-0524	3761	799	On a par with no. 1 Toshiba, but a bit more expensive, with far shorter battery life.
7.8	3:27	CA/10.3"	800/468-2162	3762	800	Nice screen, built-in 14.4-kbps fax-modem are pluses, but reliability rating is low.
7.6	3:46	CP/10.4"	800/672-9979	3763	801	Editor's note: At press time MPC Technologies was ceasing operations.

reviews plus Features Comparison and Test Report ($4.50) and Individual capsule reviews with Feature Comparison and Test Report ($1.50 each). Prices effective for the U.S. and Canada. Foreign orders are $15 for advance Top 20s, $8 for previous months' Top 20s, and $4 for individual reviews. [4] Fewer than 100 Reliability and Service Monitor responses. Rating is based on responses for this company and the average of responses for all companies. No score is shown if we received fewer than 20 reliability or service responses.

For more information about all products in this table, circle reader service no. 913.

Top 20 Notebook PCs

OUR NEW NUMBER ONE POWER NOTEBOOK—THE $5599 Gateway 2000 Solo S5-120XL—was fully loaded when we tested it. For about $1200 less, it's also available with 16MB and an 810MB hard drive.

Besides the $2199 ZDS Z-Note MX, on our chart for the first time, the chief news among budget notebooks concerns discontinued models. Dell cut loose its Latitude LX 4100D, which held the top spot last month, in favor of an all-Pentium line of notebooks, due out soon. As a result, the $1999 Toshiba Satellite 100CS ascends to budget number one. Meanwhile, MidWest Micro suspended all notebook operations, and Hertz Computer stopped selling its Z-Optima 486D100 X4E.

1 Gateway 2000 Solo S5-120XL

NEW THIS MONTH

PROS: Blazing speed, tons of memory, 5.7-hour battery life, CD-ROM drive

CONS: Expensive

We tested the new Gateway 2000 Solo P-120 in its $5599 "Best Buy" configuration. Basically that means it came loaded to the rafters, with 40MB of RAM and a 1.3GB hard drive. With that much power, it's no wonder this sleek notebook is the fastest on the chart. You can also get it with 16MB for $1200 less.

Gateway Solo

Our Solo also came with a pleasing 10.4-inch active display, but Gateway now outfits its "Best Buy" model with an equally impressive 11.3-inch screen at no extra cost. There's also a 28.8-kbps PC Card fax-modem, a removable quad-speed CD-ROM drive, and Office 95 Professional.

2 Toshiba Tecra 700CT

LAST REVIEWED: June 1996

PROS: Good performance, optional quad-speed CD-ROM drive, top-rated reliability

CONS: Expensive, a bit hefty

The Tecra 700CT P-120 is fast and loaded. The standard unit has an 11.3-inch active screen and 16MB of RAM. At $5333 it's not cheap, but this price includes an optional quad-speed CD-ROM drive. If you don't want to spend over $5000, consider the $4333 Tecra 700CS. The chief differences between this notebook and the 700CT are its dual-scan screen and standard 8MB of RAM.

3 Toshiba Satellite Pro 400CDT

LAST REVIEWED: March 1996

PROS: Fast, good battery life, quad-speed CD-ROM drive, highly rated reliability

CONS: Expensive for a P-75 notebook

4 Dell Latitude XPi P120ST

LAST REVIEWED: June 1996

PROS: Fair price for a P-120 notebook, light weight, good reliability

CONS: No sound chip or CD-ROM drive

The $4299 Latitude XPi P120ST is similar to previously reviewed Pentium-based Latitudes except for its super-VGA (800 by 600) active-matrix display. This month we also looked at the Pentium-90 version. The $3799 XPi P90ST's 5-hour battery life and PC WorldBench score of 126 are both strong.

5 WinBook XP5 P120

LAST REVIEWED: April 1996

PROS: Fast; light weight; amply configured; long battery life; built-in fax-modem

CONS: One-year warranty, low reliability rating

6 AST Ascentia J30

NEW THIS MONTH

PROS: Nice super-VGA screen, 5-hour battery life, light weight, sleek design

CONS: Sluggish performance for a P-100 notebook

AST

The $3299 AST Ascentia J30 is a stylish 6.6-pound unit with a vivid 800 by 600 active-matrix screen. Additional features include an internal 14.4-kbps fax-modem, 16-bit sound, built-in speakers, and an infrared port. This Pentium-100 notebook scored 117 in our PC WorldBench test suite—slower than many Pentium-90 notebooks. You can chalk the sluggishness up to a scant 8MB of RAM.

7 Toshiba Portégé 610CT

LAST REVIEWED: March 1996

PROS: Sturdy subnotebook with good sound and video; nice active-matrix screen

CONS: Minimal 8MB of RAM yields below-average performance

8 Texas Instruments TravelMate 5100

LAST REVIEWED: March 1996

PROS: Fast P-90 performance, 5-hour battery life, big hard drive

CONS: No weekend tech support

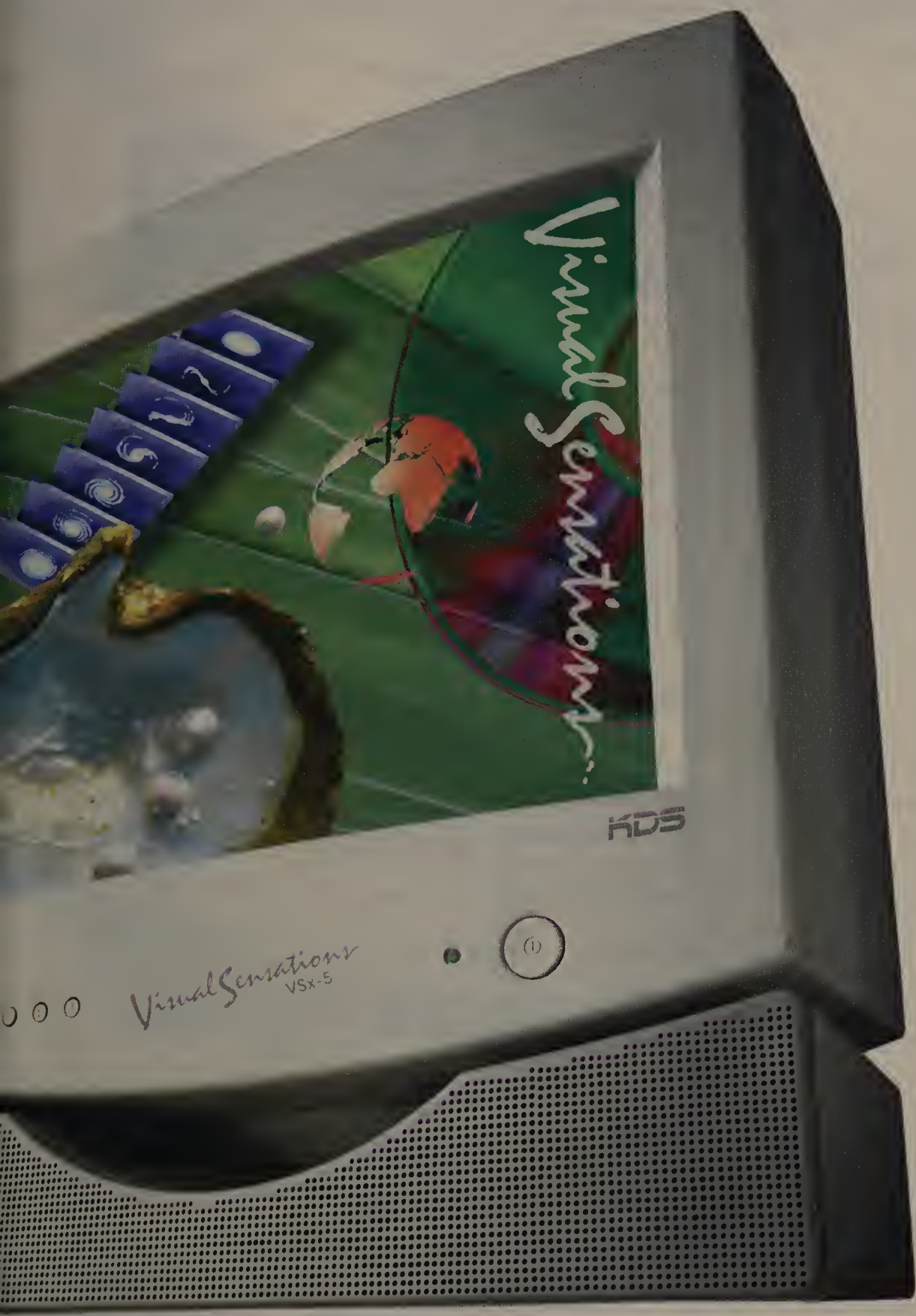
9 NEC Versa 4080H

LAST REVIEWED: April 1996

PROS: Good performance, nice keyboard, quad-speed CD-ROM drive

CONS: Expensive, muted screen colors, short battery life for a power notebook

Simply Sensational.



Visual Sensations...

You'll notice it right away.

A sleek, new cabinet housing a high-resolution 15-inch (13.6-inch viewable diagnonal) multimedia monitor. This elegantly designed enclosure is only half the beauty of this model, however. The VSx-5 has a crisp .28mm dot pitch, an image resolution of up to 1280 x 1024 pixels, and speakers that will blow you away.

Best of all, it's priced to give you the best price/performance ratio available. For more information, call us today.

Once you see it, you'll agree that the newest member of our *Visual Sensations*™ family is simply sensational.

For full product information check out our web site at http://www.kdsusa.com,
For faxed documents, call our Fax Back service at (800) 551-2589.

Circle 170 on reader service card

KDS

The Vision Of Price & Performance™

12300 Edison Way, Garden Grove, CA 92641
(714) 379-5599 • FAX (714) 379-5595

© 1996 KOREA DATA SYSTEMS CO. LTD.

10 IBM ThinkPad 760C

LAST REVIEWED: May 1996

PROS: High quality; superior 12.1-inch screen; fast; long battery life

CONS: Expensive, no CD-ROM drive

Budget Notebooks

1 Toshiba Satellite 100CS

LAST REVIEWED: June 1996

PROS: Good deal on a high-quality Pentium-75 notebook from a reliable vendor; nice keyboard

CONS: Hard drive not removable

The $1999 Satellite 100CS is Toshiba's first Pentium budget notebook. Because it comes with 8MB of RAM, it can't match the performance of the 16MB Satellite Pro 400CDT power system, but it holds its own among notebooks in its price range.

2 Toshiba Satellite T2130CS

LAST REVIEWED: March 1996

PROS: Inexpensive, nice dual-scan screen, good keyboard

CONS: Slow; aging DX4-75 CPU

At $1599, the Satellite T2130CS is priced to move. Intel DX4 notebooks are about to disappear, so now is the time to get good deals on the last of them. The T2130CS doesn't have the oomph for intense applications such as graphics programs, but its high-quality design makes it a good first notebook if you want to run basic business apps on the road.

3 Toshiba Satellite T2130CT

LAST REVIEWED: June 1996

PROS: Long 5.5-hour battery life, active-matrix screen, nice keyboard

CONS: Sluggish performance, old DX4-75 CPU

4 Dell Latitude XPi P75D

LAST REVIEWED: March 1996

PROS: Speedy, good design and construction, reliable, lots of RAM for the price

CONS: Short battery life considering the 16MB of memory

5 Mega Image MegaBook 880

LAST REVIEWED: June 1996

PROS: Good performance thanks to 16MB of RAM; active-matrix super-VGA screen

CONS: One-year warranty, unknown track record for service and reliability

6 Sharp PC 3020

LAST REVIEWED: June 1996

PROS: Inexpensive, built-in sound and fax-modem, good battery life

CONS: Sluggish for a Cyrix 5x86-100 notebook

7 AST Ascentia 950N

LAST REVIEWED: May 1996

PROS: Big hard drive, active-matrix screen, built-in sound, 5-hour battery life

CONS: Pricey for a P-75 budget notebook

8 ZDS Z-Note MX

NEW THIS MONTH

PROS: Good design, fast P-75 performance for just 8MB

CONS: Short 2-hour battery life

ZDS

This $2199 notebook doesn't have any fancy features, but it does cram what you need for running business applications into a neat, sturdy package. Backed by 8MB of RAM, this P-75 earns a PC WorldBench score of 91. Its 540MB hard drive is adequate, and the 10.4-inch dual-scan screen is easy on the eyes.

As we went to press, we learned that this notebook will soon be discontinued. So if you're interested, act fast.

9 WinBook XP5 P75

LAST REVIEWED: June 1996

PROS: Fast, good keyboard, active-matrix display, built-in 14.4-kbps fax-modem

CONS: Below-average score for system reliability, one-year warranty

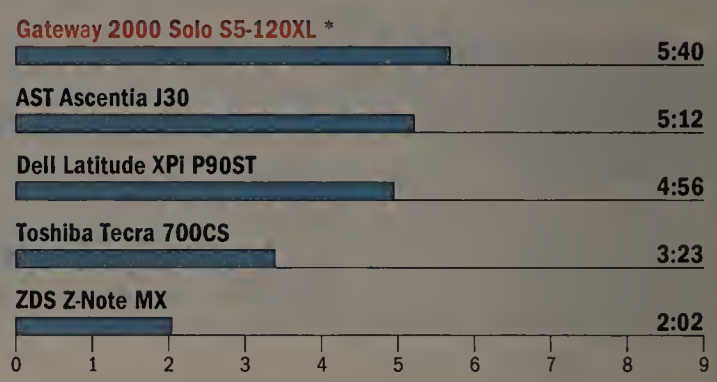
10 MPC TouchNote 1000

EDITOR'S NOTE: At press time, MPC Technologies was ceasing operations.

PROS: Inexpensive, good battery life, built-in sound and speakers

CONS: Sluggish P-75 performance, mediocre touchpad

TEST CENTER Battery Life



* Best Buy

Time in hours:minutes.

Methodology
We drain and fully recharge the battery twice and set power-saving options to match a consistent profile where possible. Office workers use Windows 95 applications, periodically saving and allowing regular idle time. Notebooks are rotated among workers. We report the time elapsed when the notebook shuts itself off.

Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

NOTE: OUR FAMILY HERITAGE.

As you'd expect, our JetDirect print servers are chips off the HP block. So quality and reliability are givens. And so is full compatibility with HP printers, new and old. On virtually any network.

But did you know how well our print servers manage all your printers? Even the ones we don't make.

Easy set-up. Monitoring. Trouble-shooting. Remote management.

What else would you expect? We live and breathe network engineering.

For detailed specs, visit http://www.hp.com/go/network_city. Or call 1-800-533-1333, Ext. 1615.

©1996 Hewlett-Packard Company RND053

HEWLETT® PACKARD

Desktop Snapshots

These systems were tested along with the others but didn't score high enough to reach the Top 20 charts.

AST Advantage 626

PROS: Good home configuration with 16MB of RAM, 1.2GB hard drive, full multimedia

CONS: Very slow for a Pentium-133

Like most home PCs we test for the Top 20, this $2399 Pentium-133 desktop is long on style but short on speed. There's great documentation and an attractive software bundle that includes Lotus SmartSuite, but the system itself is lacking. It offers little room for expansion, and its PC WorldBench score of 156 is among the lowest P-133 marks we've seen. Half the Pentium-100s we've tested are faster, and almost all cost less. *AST Computers, 800/876-4278* **Reader service no. 802**

First Computer FCS P5-150

PROS: Inexpensive; 17-inch monitor; Matrox graphics card

CONS: Low-grade mouse, no modem

First Computer Systems' $2499 Pentium-150 nearly claims slots on both the Power and Budget Top 20 charts. It's loaded with 16MB of RAM, 512K of pipeline-burst cache, a 2GB hard drive, and a 6X CD-ROM drive. Even its 189 PC WorldBench score says power. Documentation is weak, though, and the keyboard and mouse seem cheap. *First Computer Systems, 800/325-1911* **Reader service no. 803**

MidWest Micro P5-133 Home PC

PROS: Good price, loaded with features, well designed

CONS: Low reliability and service scores

There's nothing wrong with the features of this $2699 Pentium-133 minitower. It's got 16MB of EDO RAM, a 1280MB hard drive, a six-speed CD-ROM drive, a 14.4-kbps fax-modem with voice mail, and a strong bundle of home software, including Microsoft Works, Encarta, Money, and Golf. Its PC WorldBench score of 188 is above average for its class, too. Unfortunately, MidWest Micro gets low marks for both system reliability and service in our fax-back survey. *MidWest Micro, 800/871-9128* **Reader service no. 804**

NEC Ready 9619

PROS: 6X CD-ROM drive, speakers, 28.8-kbps fax-modem, large software bundle

CONS: Slow for a P-166; dull-looking monitor

The $2899 NEC Ready 9619 is a moderately priced family system. It's loaded with features, but its PC WorldBench score of 159 is remarkably low for a P-166—lower than the scores of similarly configured P-100 PCs costing hundreds of dollars less. No excuses either: The system has 16MB of EDO RAM and 256K of pipeline-burst cache. Bundled software includes Microsoft Works and Encarta. *NEC Technologies, 800/388-8888* **Reader service no. 805**

FEATURES COMPARISON This Month's Contenders—Desktops

● = Yes ○ = No

n/a = not applicable

Standard features	Acma zPower 100	Cyrix 6x86-P166+ PC
Street price as of 5/4/96 [1]	$2095	$4639
CPU	Pentium-100	Cyrix 6x86-P166+
ZIF/overdrive socket	●/○	●/○
BIOS	AMI v1.00.04 11/10/95	Phoenix v4.04 Plug and Play 2/29/96
Installed/maximum RAM (MB)	8/128	16/128
SIMM sockets/number free	4/2	4/2
Secondary RAM cache installed/ maximum (K)	256/512	256/256
Case style	minitower	minitower
Free externally accessible 3½-inch/5¼-inch drive bays	0/2	0/1
Free internal 3½-inch/5¼-inch drive bays	1/0	0/0
Free 16-bit ISA expansion slots	1 [2]	2 [2]
Free 32-bit PCI expansion slots	3 [2]	2 [2]
Hard disk	Quantum Fireball	Seagate Barracuda
Size (MB)	1280	4000
Adapter	integrated EIDE	SCSI
Graphics adapter	Diamond Stealth64 Video 2201	Matrox MGA Millennium
Installed memory (MB)/type	2/EDO DRAM	2/WRAM
Monitor	Impression 5	CTX 1765GMe
Tube/viewable diagonal (inches)	15/13.9	17/16
Dot pitch (mm)	.28	.27
Modem speed for fax/data (kilobits per second)	14.4/28.8	14.4/28.8
Sound board	integrated Vibra 16	SB AWE32
CD-ROM drive	Toshiba XM 5302B	Mitsumi CRMC-FX600S
Speed	4X	6X
Parallel/serial/mouse/SCSI ports	1/2/0/0	1/2/1/1
Service and support		
Warranty for parts/labor (years)	3/1	3/3
30-day money-back guarantee	● [4]	●
On-site service first-year price	free	free
Repair turnaround policy (days at service center)	3	1
Daily toll-free phone support (hours)	9.5	24
Weekend support	○	●
Online support sites	BBS, WWW	BBS, WWW
Automated fax support	○	●

BEST BUY

[1] All systems priced as configured with Windows 95, VGA and color monitor, keyboard, and mouse or other pointing device. Price is direct or based on vendor estimate.

NMC Expert 166

PROS: Good performance for the money, loaded with extras, nice 17-inch monitor, 28.8-kbps fax-modem

CONS: Video and sound controller share an add-in card

The $2499 NMC Expert 166 is fast, with a PC WorldBench score of 197. This Pentium-166 system is loaded with 16MB of EDO RAM, a 2.1GB Seagate hard drive, a 6X CD-ROM drive, a U.S. Robotics V.34 fax-modem, and a 17-inch CTX monitor. The video card is a disappointment, but on the plus side, it comes with 2MB of DRAM. Oddly, the video controller and the sound controller are both situated on the same add-in card, so you can't easily upgrade one without upgrading the other. *National Microcomputers, 800/800-4662* **Reader service no. 806**

Swan PowerHouse P-150

PROS: Low price, lots of expansion room, sturdily built, feature rich, 6X CD-ROM drive, wavetable sound

CONS: Slowest P-150 we've tested, short support hours

	Dell Dimension P100t	Dell Dimension XPS P133c	Diamond OfficeMate P5120	HP Vectra 500 Model 515MCx 5/166	Maximus Magna Media P-166	Micro Express MicroFlex-686/ P120+	Robotech Cobra XLT P-133	Sys Technology Performance C166+
	$1879	$3299	$1645	$3345	$2499	$1899	$2199	$2599
	Pentium-100	Pentium-133	Pentium-120	Pentium-166	Pentium-166	Cyrix 6x86-P120+	Pentium-133	Cyrix 6x86-P166+
	●/○	●/○	●/○	●/○	●/○	●/○	●/○	●/○
	AMI v1.00.03 10/27/95	AMI Rev A05 12/31/95	Award v4.50 8/28/95	Phoenix v4.05.8 11/14/95	AMI 7/15/95	Phoenix v4.04 Plug and Play 10/5/95	Award v4.50	IBM v3.27 1/29/96
	16/128	16/128	16/128	16/128	16/128	32/128	16/128	16/128
	4/3	4/2	4/2	6/4	6/4	4/0	4/2	4/2
	256/256	256/512	256/51	256/512	512/512	256/512	256/512	512/512
	desktop	desktop	minitower	minitower	minitower	minitower	minitower	minitower
	0/1	0/1	0/1	0/2	1/2	1/2	0/3	1/2
	1/0	1/0	0/0	1/0	2/0	1/0	3/0	1/0
	2 [2]	2 [2]	2 [2]	2	3 [2]	3	2 [2]	1
	4 [2]	3 [2]	3 [2]	2	3 [2]	2	3 [2]	2
	Quantum Fireball	Quantum Fireball	WD Caviar 31600	WD Caviar 31600	Seagate ST32140	Quantum Fireball	Quantum Fireball	Quantum Fireball
	1600	1080	1624	1624	2140	1280	1280	1280
	integrated EIDE	integrated EIDE	integrated EIDE	integrated EIDE	integrated EIDE	integrated EIDE	integrated EIDE	integrated EIDE
	integrated S3 Trio64	Number Nine Imagine128	Diamond Stealth64 Video 2201XL	integrated S3 Trio64	Matrox MGA Millennium	ATI Graphics Pro Turbo	Number Nine 9FX Motion331	Matrox MGA Millennium
	2/DRAM	4/VRAM	2/EDO DRAM	1/DRAM	2/WRAM	2/VRAM	2/EDO DRAM	2/WRAM
	Dell VS15X	Dell UltraScan 17LS	Amax Impression 5E	HP D2818S	MAG DX1595	KFC	Cobra 1728	MAG DX15T
	15/13.6	17/15.6	15/13.4	15/13.7	15/14	17/16	17/15.4	15/14
	.28	.28	.28	.28	.28	.28	.28	.25 [3]
	n/a	14.4/28.8	14.4/14.4	14.4/28.8	14.4/28.8	n/a	14.4/28.8	14.4/28.8
	Vibra 16	SB AWE32	n/a	SB 16	SB AWE32	ESS/1688F	SB 16	Acer SP/301
	Teac CD56E	Teac CD56E	Mitsumi CRMC-FX400D	Hitachi CDR-7730	Teac CD56E	Sony CDU77E	Mitsumi CRMC-FX600S	Teac CD56E
	6X	6X	4X	4X	6X	4X	6X	6X
	1/2/1/0	1/2/1/0	1/2/0/0	1/2/1/0	1/2/0/0	1/2/0/0	1/2/0/0	1/2/0/0
	3/3	3/3	1/1	1/1	1/lifetime	2/2	3/1	1/1
	●	●	●	○	●	●	●	○
	free	free	free	free	free	free	free	$95
	2	2	2	○	3	2	1	○
	24	24	9	16	9	9.5	9	○ [5]
	●	●	○	● [6]	● [6]	●	○	○
	AOL, BBS, CIS, Prodigy, WWW	AOL, BBS, CIS, Prodigy, WWW	BBS	AOL, BBS, CIS, WWW	BBS, MSN, WWW	WWW	BBS, WWW	○
	●	●	●	●	●	●	●	○

[2] One less 16-bit slot available when all PCI slots are filled, and vice versa. [3] Stripe pitch. [4] 45-day money-back guarantee. [5] 9 hours daily toll support. [6] Saturdays only.

The $2498 Swan PowerHouse P-150 tower has a loaded configuration, including a 1.6GB hard drive and a 6X CD-ROM drive, and it comes with six free drive bays and five free slots. This Pentium-150's PC WorldBench score of 181 is more like that of a P-133, but it's good for the price. While we don't have enough responses to our fax-back survey to score Swan's system reliability and service, early returns indicate the company does well. *Swan Technologies, 800/554-6748* **Reader service no. 807**

Sys Value Edition C166V+

PROS: Great performance at a low price, quad-speed CD-ROM drive, good monitor

CONS: Poor documentation, sparse support policies

This is the budget version of Sys's 20th-

FEATURES COMPARISON This Month's Contenders—Notebooks

● = Yes ○ = No

n/a = not applicable

Standard features	AST Ascentia J30	Dell Latitude Xpl P90ST	Gateway 2000 Solo S5-120XL	Toshiba Tecra 700CS	ZDS Z-Note MX
Street price as of 5/4/96 [1]	$3299	$3799	$5599	$4333	$2199
CPU	Pentium-100	Pentium-90	Pentium-120	Pentium-120	Pentium-75
Traveling weight (pounds) [2]	6.6	7.2	8.8	10.2	7.2
Width x depth x height (inches)	11.3 x 8.8 x 2	11 x 8.9 x 2.1	11.8 x 8.8 x 2	11.6 x 9.1 x 2.1	11 x 8.6 x 1.9
Installed/maximum RAM (MB)	8/40	16/40	40/40	8/40	8/40
Secondary RAM cache installed/maximum (K)	0/256	256/256	256/256	0/0	256/256
Installed/maximum hard disk (MB)	810/810	810/810	1358/1358	1200/1200	540/540
Removable hard disk	●	●	●	●	●
Screen type	color active	color active	color active	color dual-scan	color dual-scan
Viewable screen diagonal (inches)	10.4	10.4	10.4	11.3	10.4
Highest resolution of LCD	800 x 600	800 x 600	800 x 600	800 x 600	640 x 480
Maximum screen colors of LCD	65,536	65,536	256	256	65,536
Simultaneous LCD and external monitor	●	●	●	●	●
Mouse/keyboard ports	●/● [3]	●/● [3]	●/● [3]	●/●	●/● [3]
Cursor keys in inverted T	●	●	●	●	●
Dedicated page-control keys	●	●	●	●	●
All 12 function keys dedicated	●	●	●	●	●
Standard <Ctrl> and <Alt> layout	●	○	●	○	●
Built-in pointing device	eraserhead	trackball	touchpad	eraserhead	touchpad
CD-ROM speed	n/a	n/a	4X	4X	n/a
Built-in sound	●	○	●	●	○
Fax/data modem speed (kilobits per second)	14.4/14.4	n/a	28.8/14.4	n/a	n/a
Docking station available	●	●	○	●	●
PC Card slot Type II/III	2/1 [4]	2/1 [4]	2/1 [4]	2/1 [4]	2/1 [4]
Power management					
Type of battery	lithium ion	lithium ion	lithium ion	lithium ion	NiMH
Suspend button	●	●	●	●	●
Suspends when case closed	●	●	●	●	●
Service and support					
Warranty for parts/labor (years)	3/3	3/3	1/1	3/3	1/1
30-day money-back guarantee	○	●	●	○	●
On-site/replacement service first year price	n/a	free	free	$50	free
Repair turnaround policy (days at service center)	2	2	n/a	2 [5]	1
Daily toll-free phone support (hours)	24	24	24	24	24
Weekend support	●	●	●	●	●
Online support sites	AOL, BBS, CIS, Prodigy, WWW	AOL, BBS, CIS, WWW	AOL, BBS, CIS, Prodigy, WWW	BBS, CIS, MSN, WWW	BBS, CIS, WWW
Automated fax support	●	●	●	●	●

BEST BUY

[1] All notebooks priced as configured with Windows 95, color display, and mouse or other pointing device. Price is direct or based on vendor estimate.

[2] Includes computer, adapter, power cord, floppy drive, and CD-ROM drive if notebook has one.

[3] Mouse port doubles as keyboard port.

[4] Type III slot alternatively accepts two Type II devices.

[5] $50 per year for two-day turnaround.

COREL WordPerfect® Suite 7

32-Bit Office Suite, Graphics and Internet Power for Windows® 95

Corel® WordPerfect® Suite 7 on CD-ROM† redefines the office suite by adding powerful graphics capability and total Internet connectivity that fit the way you work today—perfectly. Powerful core application features, refined file management tools plus advanced Internet and graphics technology empower your business communications while increasing your productivity and optimizing workgroup collaboration. You'll discover how to finish faster with less effort, get the most out of Windows® 95 and put the Internet to work for you. With all this and more, Corel® WordPerfect® Suite 7 is quite simply the smartest, most powerful, most versatile suite you can buy.

Put the Internet to Work for You

Take full advantage of the Internet with a powerful built-in Internet Publisher that lets you create and instantly view Web documents. Plus, convert files to *and* from HTML and link to specific information on the World Wide Web quickly, easily and effectively.

Finish Faster with Less Effort

Corel applications share a consistent user interface and common tools such as Speller, Thesaurus, Grammatik® and File Manager to keep you ultra-productive.

Make the Most of Windows® 95

Work faster with full 32-bit applications—including support for long file names, multithreading, multitasking and OLE 2.0 in-place editing for optimum performance.

† 3.5 inch disks and CD-ROM version also available. CD-ROM drive required to access full set of applications, fonts and clipart. 3.5 inch disks contain Corel® WordPerfect® 7 module.

†† Telecommunication and other charges may apply, depending on usage and location.

The features speak for themselves:

COREL WordPerfect 7

NEW Internet connectivity - link any text directly to an Internet file or file bookmark; convert Web files directly to Corel® WordPerfect® format, ready for use

NEW Guidelines - let you change margins and columns directly on your page

NEW QuickSpots - give you one-click access to formatting options and attributes for paragraphs, table cells and graphics

NEW Spell-As-You-Go - underlines words that might be misspelled so you can correct them as you type

NEW QuickFonts - show you the last 10 fonts you've used, exactly the way they look in your documents, ready for reuse

COREL Quattro Pro 7

NEW Internet connectivity - link any cell to an Internet file—Web, FTP, HTTP, or Gopher and receive automatic updates whenever you want stock quotes, exchange rates and more

NEW Internet publishing - publish any Corel® Quattro® Pro 7 Notebook as an HTML file

NEW @functions - more than 100 brand new ones for nearly 500 in total—give you even more analytical power

NEW QuickFill - lets you fill in sequential or repetitive data instantly, and can even handle bi-directional and discontinuous ranges

COREL Presentations 7

NEW ActionLinks - move from a slide to an Internet site or to other slides with a single click for unparalleled information access

NEW Object and bullet animation - gives your slides added pizzaz

NEW Transition effects - choose from more than 100 effects including Fade, Roll and Spiral Away to text, graphics and slides

NEW File importation - from Microsoft® PowerPoint®, Lotus® Freelance Graphics® and Harvard Graphics® files

Plus Value-added Features and Applications!

Business Graphics

- CorelFLOW™ 3 for high-impact business graphics
- 150 top-quality fonts
- 10,000 clipart images

Desktop Utilities

- Sidekick™ 95 - an innovative personal organizer
- Dashboard™ 95 - maximizes personal productivity

Network and Internet Connectivity

- AT&T WorldNet℠ Service†† software including Netscape Navigator™ 2.01 Internet browser makes navigating the Net easy
- Envoy™ 7 - a versatile electronic document publisher

Kur-0220

Corel is a registered trademark of Corel Corporation in Canada, the United States and other countries. Sidekick and Dashboard are trademarks of Starfish Software, Inc. Grammatik is a registered trademark and Envoy is a trademark of Novell, Inc. AT&T WorldNet is a service mark of AT&T Corp. Netscape Navigator is a trademark of Netscape Communications Corp. All other product and company names are trademarks or registered trademarks of their respective companies.

*US$ plus applicable taxes.

http://www.wordperfect.com
Call now for faxed literature!
1-613-728-0826 ext. 3080

Circle 70 on reader service card

place Power Desktops PC. It's based on the 133-MHz Cyrix 6x86-P166+ chip. The video card is from ATI rather than Matrox, it has a 4X CD-ROM drive instead of a 6X, it lacks a modem, and its MAG 15-inch monitor, while no slouch, isn't the same MAG Trinitron model as in the power configuration. But with a PC WorldBench score of 203 and a $2239 price, it offers tremendous bang for your buck. Unfortunately, the company's track record for system reliability and service is still unknown. Tech support hours are few during the week and nonexistent on weekends. *Sys Technology, 800/613-9963* **Reader service no. 808**

USA Flex Family Special P-133

PROS: Good speaker system, 8X CD-ROM drive, 28.8-kbps fax-modem, lots of software

CONS: Mediocre P-133 performance, poor documentation

This $2399 USA Flex P-133 minitower nearly made the Budget Top 20. In addition to 16MB of RAM and a 1.2GB hard drive, it's loaded with good multimedia features, including a speaker system with subwoofer and a slew of SoftKey CD-ROMs. But the Family Special's speed is so-so for a P-133, and its documentation is disappointing. Also, consumer feedback indicates USA Flex has a shabby track record for system reliability and service. *USA Flex, 800/872-3539* **Reader service no. 822**

Xi Pro 200 MTower SP

PROS: Very fast, full multimedia, 4MB Matrox graphics card, enormous hard drive

CONS: Expensive for everyday Windows 95 use, noisy

With an impressive PC WorldBench score of 221, the Xi Pro 200 MTower SP is the fastest Windows 95 PC we've tested, but its $5699 price is steep. The high cost is primarily due to the Xi MTower's enormous 4.3GB wide–SCSI-2 hard drive and 32MB of RAM. The system is well built and highly expandable, though the mechanisms required to cool its Pentium Pro-200 processor make it a bit noisy. Until we receive some feedback about Xi from our fax-back survey, we can't evaluate its system reliability and service. Xi sells its computers with a three-year warranty on parts and labor. *Xi Computer, 800/432-0486* **Reader service no. 809**

Notebook Snapshots

These notebooks were tested along with the others but didn't score high enough to reach the Top 20 chart.

Canon InnovaBook 300P

PROS: Nice design, excellent screen, optional CD-ROM drive

CONS: Slow; quirky touchpad; short battery life

The $2299 InnovaBook 300P is well built, and its dual-scan screen approaches active-matrix quality. However, this is the slowest Pentium-75 notebook we've tested, and it runs for only about 2 hours on a single charge. In addition, we found the built-in touchpad overly sensitive and difficult to use. Canon backs its notebooks with a one-year warranty and offers toll-free technical support 18 hours a day, seven days a week. *Canon Computer Systems, 800/848-4123* **Reader service no. 810**

CTX EzBook 655CDT

PROS: Long battery life, nice screen, dual-speed CD-ROM drive

CONS: Second-slowest P-90 notebook we've tested

The $2799 CTX EzBook 655CDT looks boxy, but there's no arguing with its solid feel and fine components. The crisp active-matrix screen, the included CD-ROM drive, and the near–5-hour battery life are all pluses. However, the EzBook's PC WorldBench score of 92 is disappointing. Chalk up the relatively poor performance to just 8MB of RAM. CTX notebooks come with a two-year warranty and a 30-day money-back guarantee. The company offers toll-free tech support around the clock for the life of the system. *CTX Int'l, 800/888-9052* **Reader service no. 811**

Magitronic 550 Series

PROS: Infrared port, built-in sound, optional quad-speed CD-ROM drive

CONS: Short battery life, poor documentation

The $2889 Magitronic 550 Series notebook uses an AMD 5x86 CPU to achieve a PC WorldBench score of 177—roughly equivalent to that of a good Pentium-75 notebook. Magitronic took the cost savings from using the AMD processor and threw in 20MB of RAM, an active-matrix screen, and full multimedia. Otherwise, this is a very generic notebook, with a battery life of just 2.5 hours. Magitronic is a relatively new vendor to the Top 20, so we can't assess its reliability and service. Its standard warranty lasts two years. Tech support is free around the clock, but only for the first year. *Magitronic Technology, 770/849-0667* **Reader service no. 812**

Magitronic 600 Series

PROS: Good overall feel, crisp screen, multimedia features

CONS: Poor performance for a Pentium-90 notebook, short battery life despite new BIOS

Magitronic sent us a BIOS fix that was supposed to improve the battery life of this system. No such luck. The battery lasted less than 2 hours because power management wouldn't work under Windows 95. Moreover, the system's PC WorldBench score of 114 is very low for a Pentium-90 portable. To its credit, though, the Magitronic notebook comes with a 4X CD-ROM drive, built-in sound, and a bright 11.3-inch dual-scan super-VGA display. Overall it's a sturdy unit—one we've seen sold under other vendors' names. Unfortunately, the performance problems outweigh the good points. *Magitronic Technology, 770/849-0667* **Reader service no. 823**

Polywell Poly5133 NB8

PROS: Good price for a loaded configuration

CONS: Sluggish for a P-133 notebook, short battery life

At first glance, this $3784 notebook has everything you could want: 16MB of RAM, a 1.3GB hard drive, a removable dual-speed CD-ROM drive, an infrared port, and a 10.2-inch active-matrix display. However, because of a BIOS conflict with Windows 95, its battery life was under 2 hours in our tests. (Polywell is working on a fix that we will retest.) In addition, its PC WorldBench score of 140 was low for a Pentium-133 notebook. Polywell's standard warranty covers parts for three years and labor for five. *Polywell Computers, 800/999-1278* **Reader service no. 814**

Texas Instruments Extensa 560CD

PROS: CD-ROM drive standard, nice overall design

CONS: Slow for a P-75 notebook, subpar screen

Disappointing performance and a dull dual-scan screen tarnished our impression

Corel® Office Professional, the #1 Suite Solution for Today's Office

Corel® Office Professional includes:

- Corel® WordPerfect® 6.1
- Corel® Quattro® Pro 6.0
- Paradox® 5.0
- Corel® Presentations™ 3.0

Plus:

Business Graphics

- CorelFLOW™ 2
- 1,000 fonts
- 10,000 clipart images

Desktop Utilities

- Sidekick™ 2.0
- Dashboard™ 3.0
- Corel® Screen Saver

Network and Internet Connectivity

- AT&T WorldNet℠ Service†† software including Netscape Navigator™ Internet browser
- GroupWise™ 4.1 client license‡
- Envoy™ 1.0
- InfoCentral™ 1.1

Corel® Office Professional Beats Microsoft® Office in so many ways!

Corel® Office Professional helps you accomplish more in less time—with better-looking results. It's also the only suite that makes optimum power and productivity a reality for your business. Delivering state-of-the-art office applications, sophisticated graphics tools and superior Internet connectivity, Corel® Office Professional's 16-bit power outperforms Microsoft® Office for Windows® 95 in several key areas.

Corel® WordPerfect® 6.1

- ★ Combined text justification - use flush left, center and flush right *all on the same line*
- ★ Reveal codes display - shows every formatting detail of your document—great for trouble-shooting
- ★ QuickTasks™ - automated tasks that work across multiple applications
- ★ Grammatik® - rewrites incorrect sentences with a click of the mouse. Helps you write better—faster
- ★ QuickFinder™ - finds any file from anywhere you specify in a flash
- ★ Graphics editing - control the brightness and contrast of a picture
- ★ Make It Fit™ Expert - shrinks or expands a document and you choose what formatting features are changed
- ★ QuickCorrect™ - corrects typos and expands abbreviations on the fly
- ★ Document Experts - just fill in the blanks for instant professional letters, memos, fax sheets and more or make your own
- ★ 98 spreadsheet functions - all available with a click of the mouse

Corel® Quattro® Pro 6.0

- ★ Formula Composer - revolutionizes creating, editing and viewing formulas
- ★ SpeedFormat - apply your choice of ready-made formats to any range—for great-looking spreadsheet printouts
- ★ Analytical Experts - 19 Analytical Experts do your calculations for you
- ★ Analytical Graphs - automatically create linear fits, moving averages, aggregations and more
- ★ Coaches™ - interactive Coaches™ teach you all you need to know
- ★ QuickTemplates - for fast invoices, purchase orders, expense reports and more
- ★ Cell capacity - enter more than 1,000 characters per cell

Paradox® 5.0

- ★ Query multiple databases simultaneously both locally and on a network
- ★ OLE 2.0 client and server support - put a Paradox® data table right where you want it
- ★ Complex data modeling - draw multiple relationships and links between data tables with a simple click and drag
- ★ Data security - private user directories, record-level locking and table- and field-level validity checks ensure that data is solid and secure
- ★ Object-oriented design - everything in Paradox® is a visually represented computer object, making it easy to create items from data tables and reports to full database applications
- ★ Experts - quickly creates forms and reports

Corel® Presentations™ 3.0

- ★ Built-in TWAIN interface lets you scan artwork or drag video images directly into your show
- ★ Build slide shows directly from your WordPerfect®, Microsoft® Word or Lotus Ami Pro® outline
- ★ Versatility - apply multiple backgrounds, graphics, sound and text within one presentation

The Bottom Line:
Corel® Office Professional for Windows® 3.1x lets you do all this more quickly and easily than Microsoft® Office Professional for Windows® 95.

Corel is a registered trademark of Corel Corporation in Canada, the United States and/or other countries. Microsoft and Windows are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Sidekick and Dashboard are trademarks of Starfish Software Inc. Paradox is a registered trademark of Borland International, Inc. Grammatik is a registered trademark and GroupWise and Envoy are trademarks of Novell, Inc. AT&T WorldNet is a service mark of AT&T Corp. Netscape Navigator is a trademark of Netscape Communications Corp. All other company and product names are trademarks or registered trademarks of their respective companies.

‡Single-user client license for GroupWise™ 4.1 only. No actual software or documentation included.

††Telecommunication and other charges may apply, depending on usage and location.

Circle 78 on reader service card

KUR-0228

Office DEPOT
Office Products at Warehouse Prices!
1-800-685-8800

Call for the location nearest you!

http://www.corel.com
Call now for faxed literature!
1-613-728-0826 ext. 3080

of the otherwise admirable TI Extensa 560CD. Overall, we liked the notebook's sleek design and comfortable, responsive keyboard. For $2599 you get good multimedia capabilities, including a quad-speed CD-ROM drive and 16-bit sound. The 8.2-pound traveling weight and 3-hour battery life are average for a multimedia notebook. Even the system's documentation is worthy of praise. Unfortunately, the Extensa's PC WorldBench score of 81 is low for a Pentium-75 notebook with 8MB of RAM. The standard warranty on the Extensa line lasts one year. You can extend coverage for $99 per additional year. Toll-free technical support is available 24 hours a day, seven days a week. *Texas Instruments, 800/848-3927* **Reader service no. 815**

TEST REPORT This Month's Contenders

Systems are arranged in order of overall performance from best to worst, based on the normalized, weighted scores from six tests.

Methodology We tested each system as supplied by the manufacturer. All tests are performed under Windows 95 configured with an HP LaserJet IV as the default. We disable any power-saving features. We set the video resolution to 800 by 600 in 256 colors, using the supplied video driver where possible. We load the test applications and files and the test automation software and scripts.

Word 7.0 for Windows 95 (25 percent of weighting)
We open multiple documents, format text, copy and paste, close files, scroll, and save files. We also change document views, insert text, check spelling, repaginate, count words, print preview, and mail merge.

Excel 7.0 for Windows 95 (20 percent)
Using a variety of worksheets including an automobile statistics sheet, a multisheet federal income tax workbook, a variable-rate mortgage worksheet, and an analysis of life insurance policies, we perform common functions and tasks including opening a file, formatting, data entry, sorting, recalculation, data query, print preview, printing, and saving the file.

Picture Publisher 6.0 for Windows 95 (15 percent)
Using an assortment of graphics, we perform functions including opening and saving files, zooming, scrolling, palette changes, posterization, image masking, hue shifting, feathering, and copying and pasting.

Paradox 5.0 for Windows (15 percent)
We simulate an order entry system. We import tables and post a series of orders, looking up customer and product data in the process. We perform a variety of queries, edit data, and create reports.

WordPerfect 6.1 for Windows (15 percent)
We open different-size files, search for text, change fonts, enter text, save files, and jump to a particular page. We also check spelling, copy and paste, scroll, change document views, and insert one file into another.

1-2-3 release 5 for Windows (10 percent)
Same functions as the Microsoft Excel test.

Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

BEST BUY

Introducing SimpleJack™

The opening you've been waiting for.

Presenting the world's first integrated in-line, direct-connect PC Card phone jack.

The SimpleJack™ Advantage

Simple to use. Flip open SimpleJack™ and plug in a standard telephone line. That's all. No more interface cables to fuss with or lose.

Horizontal connection. With SimpleJack™, phone cords are kept safely flat on the table, away from your hands and other hardware attachments.

Versatile. SimpleJack™ can be shifted to the PC Card's external port to make room for a second PC Card. Then it can be inserted back into the card for travel.

It may look small.

But the fact is, our new SimpleJack is the biggest thing to hit portable communications since, well, the Pony Express.

Because now connecting your portable to a phone line is as fast and easy as popping open SimpleJack and plugging in a standard RJ-11 phone cord.

SimpleJack accepts phone cords directly, without awkward proprietary interface cables. And SimpleJack's unique horizontal position keeps phone cords safely flat on the table.

You can open and close SimpleJack inside your portable's stacked Type II PCMCIA slot. Or, SimpleJack can be shifted to the card's external port to make room for a second PC Card.

SimpleJack is just one of the many advanced features you'll find in our 28.8 Communicator. Powerful MNP10-EC and TX-CEL cellular error control and avoidance technology makes calling over a cellphone more reliable.

Voice mail capabilities allow you to automatically record incoming calls.

And versatile communications software for Windows® 3.1 and 95 make it easy to send and receive faxes, data and access the Internet.

To find out more about SimpleJack, call us today at 1-800-4-SIMPLE (1-800-474-6753).

Because in today's world, you need more than just the right technology.

You need the right connections.

28.8 Communicator with SimpleJack™

- Direct in-line RJ-11 phone connector
- 28,800 bps V.34 data
- 14,400 bps fax
- Cellular ready
- MNP10-EC cellular error correction
- TX-CEL cellular error avoidance
- Digital line guard
- Complete voice mail capabilities on systems with integrated sound
- Ultrasonically welded steel case
- Windows® 3.1 and 95 compatible communications software
- Five year warranty

Use a direct-connect cable to plug a cell phone directly into the 28.8 Communicator with SimpleJack.

Simple Technology offers a complete line of plug n' play communication, networking and memory PC Cards for today's mobile professionals.

1-800-4-SIMPLE
4 7 4 6 7 5 3

http://www.simpletech.com

Simple® TECHNOLOGY

Circle 199 on reader service card

*Patent-pending

For instant product information call our fax-on-demand: 1-800-429-5626 x500

LS-120 diskettes require compatible drives. The circle-pyramid logo is a trademark of 3M. ©3M 1996

Larger files. Overcrowded hard drives. Piles of diskettes. Sound familiar? Now you can reliably meet your high capacity storage needs. Introducing the 3M brand LS-120 laser servo 120 MB diskette, the next standard in diskette technology. It works like the diskettes you're using now. Only it's faster and it holds more. Up to five times faster and holds 80 times more. Multi-media presentations. Downloaded Internet files. Large database files.

What's more, new LS-120 drives also read and write your current diskettes up to three times faster. No wonder more businesses protect important information on 3M brand data storage products than on any other brand. Look for the new LS-120 drives built into new Compaq PCs or available as an option. For information call 1-800-888-1889, ext. 4001, e-mail us at datastorage@mmm.com, or visit our Web site at www.mmm.com/datastorage.

TM

The reasons for our new 120 MB diskette just keep stacking up.

3M *Innovation*

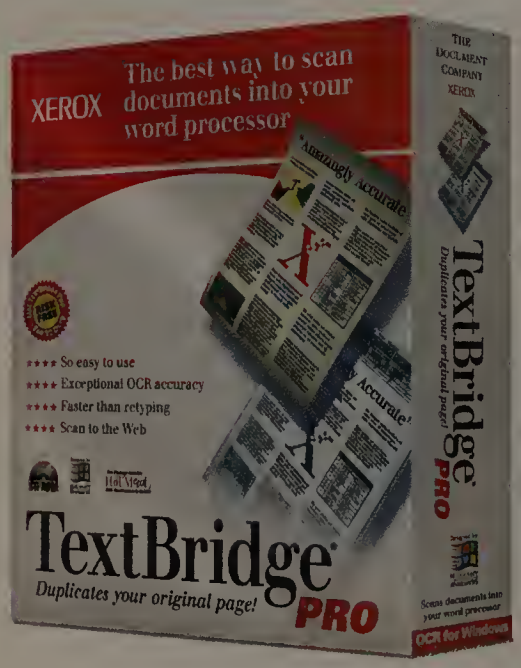
Circle 4 on reader service card

¶

Our TextBridge Pro scanning software even reads the characters you don't see.

If you've ever scanned text, you know. Getting tabs, margins and paragraph breaks right is just as important as getting words right. Because without format, you might as well retype the whole thing.

Scanning pages with TextBridge® Pro 96 OCR software is just like putting the original document straight into your PC. Headers, columns, cell tables, text and all. You get a formatted document you can work with right away.



TextBridge Pro scans text directly into any word processing program with superior accuracy. It's also designed for Windows 95, and runs on NT and 3.1. TextBridge Pro includes SoftQuad's HoTMetaL light 2.0, the HTML word processor for the World Wide Web. And with the Xerox Guarantee that includes unlimited toll-free support†, plus a thirty-day, risk-free offer, you can't go wrong.

*Increase your scanner's accuracy. Upgrade to TextBridge Pro from any OCR scanning software for just $129.**

To learn more, call us: *1-800-248-6550, ext. 3,* visit us: www.xerox.com/products/tbpro/ or see us on CompuServe at Go TextBridge. We'll show you how to get a more accurate scanner without buying a new one. With the scanning software that can read almost anything. Even if it's invisible.

THE DOCUMENT COMPANY
XEROX

In Canada call 1-800-ASK-XEROX.

†For registered users. *Manufacturer's suggested retail price. Actual price may vary. ©1996 Xerox Corporation. Xerox,® The Document Company,® the stylized X, and TextBridge® are trademarks of Xerox Corporation

EGGHEAD SOFTWARE · PC Connection · COMPUSA · COMPUTER Gray · MICRO CENTER · BEST BUY

Win a Vektron Multimedia P-100

Have you ever contacted your PC maker for service and support? Or has your PC been trouble-free? Tell us about it! Fill out and fax in the questionnaire below—even if you have no problems to report, and even if you have responded to this survey before—and we'll enter you in a drawing to win a Vektron Multimedia P-100, a Best Buy Pentium-100 PC in this month's Top 20.

HOW TO ENTER: FOR BEST RESULTS, PHOTOCOPY THIS PAGE. Fax your completed survey to 415/357-4522. Do NOT fax a cover page. Or mail it to *PC World*, Box 7-SS, c/o 800-SCAN, 543 Howard St., San Francisco, CA 94105-3013. Surveys must be received by July 31.
PRIZE: One entry per person. IDG employees and their families are not eligible. One prize will be awarded through a random drawing. *PC World* will make reasonable efforts to contact winners by telephone and fax. If *PC World* is unable to do so within 30 days of the drawing, a new winner will be selected. No purchase necessary. Void where prohibited by law.
HOW TO FILL OUT THE FORM: Print your name (block capital letters) and your fax number, and fill the circles for each digit of your daytime phone number. Then fill out the questionnaire. AVOID GOING OUTSIDE THE LINES!

LAST, FIRST NAME

FAX NUMBER

ZIP CODE

Please fill in your daytime phone number below.

1	○	○	○	○	○	○	○	○	○	○
2	○	○	○	○	○	○	○	○	○	○
3	○	○	○	○	○	○	○	○	○	○
4	○	○	○	○	○	○	○	○	○	○
5	○	○	○	○	○	○	○	○	○	○
6	○	○	○	○	○	○	○	○	○	○
7	○	○	○	○	○	○	○	○	○	○
8	○	○	○	○	○	○	○	○	○	○
9	○	○	○	○	○	○	○	○	○	○
0	○	○	○	○	○	○	○	○	○	○

How did you get this copy of *PC World*?
○ By subscription ○ On the newsstand ○ From someone else

ABOUT YOUR PC

Who is the manufacturer of the PC you use most frequently?

○ Acer ○ Acma ○ ALR ○ Apple ○ AST ○ AT&T (NCR) ○ Austin (IPC) ○ Axik ○ Blackship ○ Canon ○ Compaq ○ Compudyne
○ Computrend ○ Comtrade ○ CTX ○ Dell ○ Diamond ○ Digital (DEC) ○ DTK ○ EPS ○ Epson ○ Everex ○ Future Tech ○ Gateway 2000
○ Hewlett-Packard ○ HiQ ○ Hyundai ○ IBM ○ Insight ○ Intelesys ○ Leading Edge ○ Micro Express ○ Micron ○ Midwest Micro ○ MIS ○ Nat'l Micro
○ NEC ○ Netis ○ Packard Bell ○ Panasonic ○ PerComp ○ Pionex ○ Polywell ○ Quantex ○ Robotech ○ Samsung ○ Sharp ○ Swan
○ Tangent ○ Texas Instruments ○ Toshiba ○ Twinhead ○ USA Flex ○ Vektron ○ VTech (Expotech, Laser) ○ WinBook ○ Zenith (ZDS) ○ Zenon ○ Zeos ○ Other

What size is this PC?
○ Desktop ○ Notebook/laptop ○ Handheld

What is the CPU?
○ PowerPC ○ Pentium ○ 80486 ○ 80386 ○ Other

Where did you buy this PC?
○ Local dealer ○ Mail/phone order ○ Direct from field sales force ○ Membership discount store ○ Computer superstore ○ Home electronics store ○ Retail store ○ Value-added reseller ○ Other

After ordering, how long did it take to get your PC?
○ Less than 1 week ○ 1–2 weeks ○ 3–4 weeks ○ More than 4 weeks

Who set up your PC?
○ Dealer/retailer/VAR ○ Staff computer technician ○ Self or coworker

Where do you use this PC? ○ At home/home office ○ At work ○ Both

WHEN YOU FIRST GOT YOUR PC

When did you buy this PC? (Specify month and year.)

○ Jan ○ Feb ○ Mar ○ Apr ○ May ○ June ○ July ○ Aug ○ Sept ○ Oct ○ Nov ○ Dec
○ 91 ○ 92 ○ 93 ○ 94 ○ 95 ○ 96

When you first set up your PC, were any components "dead on arrival" (DOA)?
○ Yes ○ No ○ Don't know

If so, which component was it? (Mark all that apply.)
○ Battery ○ CD-ROM ○ CPU ○ Floppy drive
○ Graphics/video board ○ Hard drive ○ Keyboard ○ Memory
○ Modem/fax board ○ Monitor/screen ○ Motherboard ○ Mouse
○ Power supply ○ Sound board ○ Other

Did your problem occur only after you added your own hardware or software?
○ Yes ○ No ○ Don't know

Would you buy this brand of PC again?
○ Yes ○ No ○ Not sure

How many times have you had a problem with this PC?
○ No problem ever ○ One ○ Two ○ Three ○ Four ○ More than four

If you have had a problem that you have not reported in a previous survey, please fill out the right column. If you are reporting a DOA for the first time, skip to the service section.

NEW PROBLEM REPORT

Please answer for the most recent problem—*other than DOA*—not reported in a previous survey.

When did this problem occur? (Specify month and year.)

○ Jan ○ Feb ○ Mar ○ Apr ○ May ○ June ○ July ○ Aug ○ Sept ○ Oct ○ Nov ○ Dec
○ 91 ○ 92 ○ 93 ○ 94 ○ 95 ○ 96

How long was this after you purchased your PC?
○ Less than 1 month ○ 1–3 months ○ 4–6 months ○ 7–12 months ○ More than 12 months ○ Not sure

Did the problem occur as a result of adding new hardware or software?
○ Yes ○ No ○ Don't know

Did the problem occur under warranty?
○ Yes ○ No ○ Don't know

What was the problem finally identified as? (Mark all that apply.)
○ Faulty component ○ Incorrectly installed software ○ Wrong configuration ○ Faulty peripheral ○ Device conflicts ○ OS problem ○ Other ○ Don't know

If a component failed, which one was it? (Mark all that apply.)
○ Battery ○ CD-ROM ○ CPU ○ Floppy drive
○ Graphics/video board ○ Hard drive ○ Keyboard ○ Memory
○ Modem/fax board ○ Monitor/screen ○ Motherboard ○ Mouse
○ Power supply ○ Sound board ○ Other

SERVICE

Please use this section to describe the service and support you received for the problem reported above or the DOA reported at left.

Who fixed your PC?
○ Manufacturer ○ Dealer/store where purchased ○ Manufacturer's authorized repair technician ○ Self ○ Other

What types of service and support did you receive? (Mark all that apply.)
○ Phone ○ On site ○ In store ○ System swap ○ Component swap ○ Factory return

If you received phone service, how long were you on hold?
○ Not at all ○ Less than 1 minute ○ 1–2 minutes ○ 3–5 minutes ○ 6–10 minutes ○ 11–20 minutes ○ More than 20 minutes

How long did it take before you talked to the person who finally helped you?
○ Less than 15 minutes ○ 15 minutes–1 hour ○ 2–5 hours ○ 6–10 hours ○ 11–24 hours ○ 1½–2 days ○ 3–5 days ○ 1 week or more

How long did it take to resolve the problem completely?
○ 1–2 days ○ 3–7 days ○ 8–14 days ○ 15–30 days ○ More than 1 month ○ Never resolved ○ Awaiting resolution

Was the problem resolved to your satisfaction?
○ Yes ○ No

How would you rate the person(s) who helped you?

	Poor		Good		Excellent
Courtesy	○	○	○	○	○
Knowledge	○	○	○	○	○
Follow-through	○	○	○	○	○

Based on the service and support you received, would you buy this brand of PC again?
○ Yes ○ No

On the whole, how satisfied are you with the service and support you received?
○ Not at all ○ ○ Satisfied ○ ○ Extremely satisfied

PLEASE FAX TO 415/357-4522. FOR BEST RESULTS, PHOTOCOPY THIS PAGE.

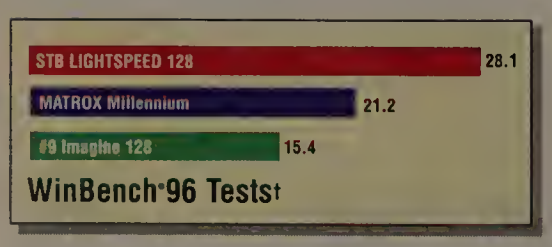
Q: What happens when you combine 128-bit video technology and the fastest memory chip?

Tseng Labs ET6000, 128-Bit Graphics Accelerator
(Ideal for displaying multiple video windows)

MoSys Multibank MDRAM - 800 MB/sec.Transfer Rate
(Ideal for obliterating any graphics bottleneck)

A:

LIGHTSPEED 128 - Suggested Retail $249
(The fastest 128-bit video card at any price)

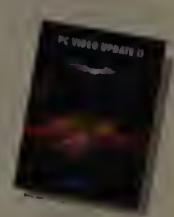


STB®
STB Systems, Inc.

Circle 210 on reader service card

COMPUTER City COMPUSA ELEK-TEK, Inc. MICRO CENTER Designed for Microsoft Windows 95 MoSys® TSENG LABS

Call now for your PC Video technology update
(888)234-8750
http://www.stb.com



Copyright 1996 STB Systems, Inc. All Rights Reserved. All trade names referenced are the trademarks, service marks, or registered trademarks of their respective holders. For a copy of the terms of the limited lifetime warranty contact STB at (214)234-8750. †WinBench 96 1.0 conducted on an Gateway 2000 (model P5-166,w/Windows95) 166MHz Pentium, PCI 2.0 Bus, 512KB Pipeline cache, 16MB EDO DRAM, Caviar IDE HD, 800x600 with 16.7 million colors at 75 Hz refresh. Competitor's boards were configured with 2MB memory. STB LIGHTSPEED 128™ Matrox Millennium, and Number Nine Imagine 128 were run using driver versions 1.21, 2.30 and 2.09 respectively. Prices and specifications subject to change without notice.

VisionMaster Pro: Newcomer Takes Top Spot

Near-Perfect Vision
Superb graphics detail, readable text, and a full suite of advanced controls earn the Iiyama VisionMaster Pro 17 our top Best Buy.

In an ideal world, all monitors would display text and graphics perfectly. The fact is that some models are good for graphics, while others are better with text. We seldom see a monitor that excels at both. An exception: Our new number one Best Buy, the $865 Iiyama VisionMaster Pro 17. Of the five new monitors that earn a spot on our chart this month, this 17-inch Iiyama monitor makes words and pictures look their sharpest. On-screen menu controls are extensive yet easy to use. For example, if the picture geometry is distorted or if you see moiré patterns, the monitor's three-button control panel lets you navigate through a menu of 18 on-screen controls. Thermometer-style bars help you fine-tune settings that are saved in the monitor's memory. You can save up to 19 settings.

Although color graphics are not as true-to-life as on the Iiyama, text looks just as crisp on our new number two Best Buy, the $749 Samsung SyncMaster 17GLi. Samsung's monitor costs $116 less than the Iiyama, yet it has an equally robust array of controls that are a bit easier to adjust. The exact adjustment level appears on screen at the touch of a button, so there is no need to search through menus.

To make room for our two new Best Buys, March's top-ranking 17-inch monitor, the EIZO Nanao FlexScan F2-17 (recently known only as Nanao), slips to third. It's followed by the ViewSonic Optiquest V775—a good deal at $699. In our tests, text was easy to read on the V775's screen, and our test image of glazed fruit had better than average detail, albeit not the best. CAD users and desktop publishers will appreciate ViewSonic's full suite of advanced controls that let you fix image geometry or correct

TOP 10
17-INCH MONITORS

	Last ranking	First reviewed	Street price	Overall rating	Text quality rating	Graphics quality rating	Features, ease-of-use rating	Viewable screen diagonal (inches)	Max. refresh rate at 800 X 600 (Hz)	Reader service number	Comments
1 **Iiyama VisionMaster Pro 17** 800/394-4335	–	current	$865	85	85	83	77	15.90	120	621	Superb text and graphics, Level 2b Plug and Play[1], sharp 0.25mm stripe pitch.
2 **Samsung SyncMaster 17GLi** 800/933-4110	–	current	$749	85	83	71	73	15.63	104	622	Excellent text detail, extensive and intuitive on-screen menus, Level 2b PnP.
3 **EIZO Nanao FlexScan F2-17** 800/800-5202	1	Nov 95	$970	85	81	71	83	15.71	110	623	Great text detail, Level 2b PnP, easy on-screen controls, screen adjustment software.
4 **ViewSonic Optiquest V775** 800/888-8583	–	current	$699	84	80	71	62	15.90	120	624	Good price, very good text display, fast refresh, Level 2b PnP, 0.26mm dot pitch.
5 **NEC MuitiSync XV17+** 800/632-4636	–	current	$849	84	80	72	73	15.45	75	625	Very good text, Level 2b PnP, screen adjustment software.
6 **Princeton Graphic Uitra 17+** 800/747-6249 ext. 182	–	current	$649	83	73	78	67	15.80	120	626	Lowest price on chart, fast refresh, Level 2b PnP, very good graphics, easy to adjust.
7 **Mitsubishi Diamond Pro 17TX** 800/843-2515	3	Nov 95	$1073	83	76	72	85	15.89	120	627	Level 2b PnP, fast refresh, screen adjustment software, 0.25mm stripe pitch; pricey.
8 **MAG innoVision MXP17F** 800/827-3998 ext. 163	4	Nov 95	$950	82	76	85	67	15.97	120	628	Excellent graphics, fast refresh, 0.26mm dot pitch; no PnP or on-screen controls.
9 **ViewSonic 17PS** 800/888-8583	5	Nov 95	$995	82	72	77	76	15.71	128	629	Very good graphics, Level 2b PnP, high refresh, 0.25mm dot pitch; pricey.
10 **Nokia Vaiuegraph 447L** 800/296-6542	8	Nov 95	$695	81	62	82	60	15.70	85	630	Good price, excellent graphics, 0.26mm dot pitch; okay text, no PnP or on-screen controls.

[1] Level 1 Plug and Play sends monitor settings to graphics card; Level 2b adds a bidirectional capability between graphics card and monitor.

BEST BUY

Methodology We tested the monitors at a resolution of 800 by 600, set at 65,536 colors and a vertical refresh rate of 72 Hz. We used a Pentium-90 PC with 16MB of RAM and a Diamond Stealth 64 PCI graphics card with 2MB of DRAM. The overall rating includes ratings for display quality (50 percent), features (25 percent), price (20 percent), and service and support (5 percent). For all ratings, higher is better. Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

For more information about all products in this table, circle reader service no. 903.

Sharp Words
Small type is easy to read across the screen on Samsung's $749 SyncMaster 17GLi. If you're looking for an affordable 17-inch monitor that's easy on your eyes and doesn't skimp on features, check out the 17GLi.

separate color values. ViewSonic's one-button control menu and thumbwheel dial scheme is odd, but it works. You press the button to activate the menu, turn the dial to select the menu item you want, then click the button again and adjust with the dial. The visual feedback and logical feel of the menus allow precise adjustments. Adjusting contrast and brightness, however, requires three clicks rather than one simple step.

In fifth place, the NEC MultiSync XV17+ replaces the older MultiSync XV17 model that held second place in March. Text looks great on both monitors, but we were a little less wowed by graphics quality on this newer model. At $849, the XV17+ costs $50 more than the older model, but it has on-screen menus and Level 2b Plug and Play support. Our judges liked how its menus avoid jargon and use animated icons to demonstrate how each control works. For example, the pincushion control is called In/Out and an icon for it bows in and out along the edges so you quickly get the idea. For contrast and brightness, NEC still uses old-fashioned dials, so everyday adjustments are quick.

At an affordable $649, Princeton Graphic's Ultra 17+ lands in sixth place. Our test images of fruit and skin tones looked very good, and above-average text detail made reading easy. Fancy controls? The 14 buttons on this monitor look a bit overwhelming, but they get the job done easily. No need to decipher cryptic icons or hunt through menus; just tap a button and the appropriate adjustment gauge appears.

Seen But Not Forgotten

Three other monitors we tested fell just short of our Top 10. Sony's $999 Multiscan 17sfII does a great job of displaying text, but for this price we expected to see more advanced controls—such as trapezoid and barrel correction. How does the 17sfII compare to its 17sf predecessor we reviewed last November? The 17sfII model is Plug and Play ready, sports a flatter tube that reduces screen glare, and now includes intuitive on-screen menu controls. Finally, Sampo's AlphaScan 17mx ($620) and 17gx ($729) are both reasonably priced and offer high refresh rates and a good set of basic controls, but mediocre text and graphics scores hamstring their Top 10 chances.

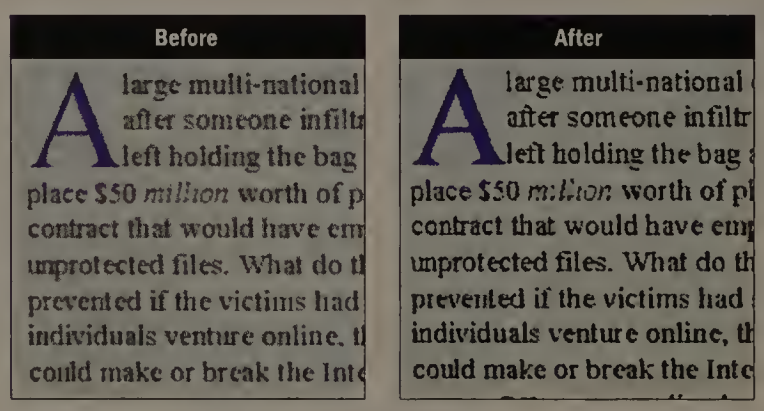
—John Goddard

MONITOR BASICS: Tips and Terms

Whether you're shopping for a new monitor or want to stick it out with the one you've got, here's a quick list of things that will improve your image.

Refresh rate Did you know that when you read from a screen your eyes blink only a quarter of the time they normally do? Because of this, eyeballing a display all day can really take its toll. For comfortable viewing, your monitor should be set to refresh the screen at a rate of at least 72 Hz. If your eyes still smart at the end of the day, try speeding up the refresh rate to 85 Hz—if your graphics card can support it. Use your graphics card utility driver to change the refresh rate.

Geometry Each time a monitor is transported, the risk of distorting the picture shape increases. To improve your chances of fixing a skewed image, look for monitors with lots of geometric controls. If the picture is bowed on the edges, pincushion and barrel controls can straighten edges inward or out. A trapezoid control will fix a image that is too narrow or wide at the top or bottom, and a rotation tool can make the entire screen level again. Better monitors stash these advanced tools in submenus to avoid accidental changes, and have a reset button to use if you mess up.



Blurred letters and dull colors on your monitor? Lowering the contrast and brightness levels may improve the picture.

Focus and color Before you jump to the conclusion that your monitor is out of focus or the colors are dull, try fiddling with your contrast and brightness controls. By turning down these controls, you should see sharper text and richer colors.

On-screen menus Most new monitors now sport on-screen menus that you control using buttons below the screen. They offer greater precision than the traditional dial approach, but some complicate a simple task such as changing contrast or brightness. Before you buy, check how easy it is to make simple adjustments. The fewer buttons and menus you have to use, the better.

IT'S A FACT

That DTK's QUIN Series is:

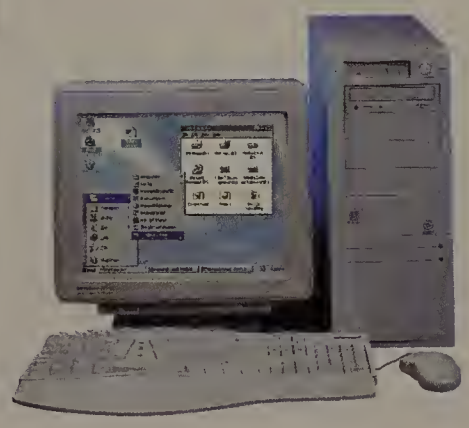
Powerful, Affordable, & Reliable.

Introducing A Winner

QUIN-55/SOHO

- Pentium® 100/120/133/166/200MHz Processors
- AMI Plug & Play BIOS
- Intel 430HX Chipset with ECC Feature
- 512KB Pipelined Burst Cache On-board
- Up to 128MB of EDO RAM
- PCI 1MB/2MB VGA: S3 765, or ET-6000 Chip
- EIDE Hard Drive 1.2 or 2.0GB, 10.5ms Access Time
- 6x or 8x EIDE CD-ROM Drive
- 28.8 Fax/Modem Card
- Desktop or Mid-Tower Chassis
- MS Mouse & Natural Keyboard
- MS Windows® 95
- MS Games For Windows® 95
- MS Value Pack (Works, Money, Encarta, Bob, Scenes)

Designed for Microsoft Windows 95



QUIN Series Comes With:

- Award-winning Performance
- Four-Star Rating Service & Support
- FCC Class B Approval
- UL Listing
- 2-Year Parts & Labor Warranty
- Lifetime Technical Support
- Local Service & Support

Here's proof. As a result of PC World's rigorous Windows 95 tests on a slew of Systems, DTK QUIN series came out at the top once again. The QUIN series has received Best Buy and Top 20 Awards month after month in Power and Budget categories. Just check the back issues and see.

PC WORLD BEST BUY · PC WORLD BEST BUY · PC WORLD BEST BUY · PC WORLD BEST BUY

What's more, PC World conducted a Reliability & Service survey (Dec. '95) with its readers, and found DTK to be a winner. Receiving a 'Four-star' rating, DTK was also mentioned to have "Minuscule system DOA rate and few unresolved problems."

★★★★

Check us out on the World Wide Web at: www.dtkcomputer.com

For more information, please call 800-289-2385 (BUY-A-DTK). Call now and pick a winner!

dtk®

DTK Computer Inc.

DISCOVER THE DIFFERENCE

intel inside® pentium® PROCESSOR

The DTK Logo is a registered trademark of DTK Computer, Inc. Microsoft is a registered trademark and Windows NT Logo is a trademark of Microsoft Corporation. The Intel Inside and Pentium Processor Logos are trademarks of Intel Corporation. All other company trademarks are trade names of each respective company. Specifications are subject to change without notice. 596

Circle 84 on reader service card

fstn.your.stblt.

NewCom Multimedia Kits Put You In the Fast Lane.

Information is moving fast these days, and you need an Internet multimedia kit that won't leave you coasting in the slow lane. NewCom Multimedia Kits combine leading-edge multimedia and communications hardware with powerful Internet software to provide you with the most complete solutions for exploring and doing business on the Internet.

NewCom's deluxe Multimedia Kit comes packed with a high speed NewCom modem, stereo sound card, rapid-read CD-ROM drive, full range 3" desktop speakers, microphone, a large selection of software titles and Internet Phone by Internet Relay Chat™, one of the hottest new Internet products that lets you communicate with other Internet users worldwide. And NewCom has other kit configurations, including one that's just right for your office or home. So buckle up and get into the fast lane with NewCom.

Call 1-800-5NewCom.

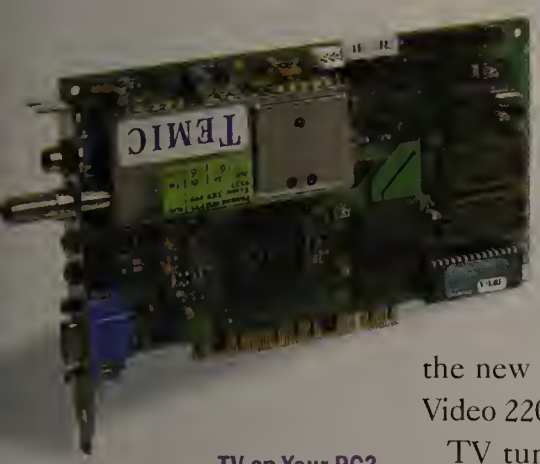
NEWCOM™

Your.lift.2.the.info.superhwy.

NewCom, Inc., a subsidiary of Aura Systems, Inc. • 31166 Via Colinas, Westlake Village, CA 91362 • Tel (818) 597-3200 • Fax (818) 597-3210 http://www.newcominc.com

Circle 24 on reader service card

Diamond Does Fast Graphics and TV, Too



TV on Your PC?
The Diamond Stealth64 Video 2201TV puts the TV remote on your Windows desktop and delivers strong performance to boot.

A computer is meant to increase your productivity. But these days you can kill as much time at your keyboard as you can on your couch. Two of the four new boards we tested this month work with TV tuners that let you plug an antenna or a cable hookup into the back of your system and watch television. Of the new boards, only the $269 Diamond Stealth64 Video 2201TV made the Top 10.

TV tuner add-in cards are nothing new, but the Stealth64 Video 2201TV is the first graphics board we've tested that has the tuner built in (see *New Products*, June). We got good reception, considering all the interference in the PC World Test Center. More important, the built-in tuner didn't affect the board's speed. That means you can use the Stealth64 Video 2201TV to monitor the stock market on CNN, for example, without slowing down your programs.

We also tested Connectware's $499 RasterMedia with its $149 tuner add-in card. The RasterMedia is a well-rounded multimedia board that also acts as a wavetable sound card. It did a good job of running both business applications and video. But at $499 it's hard to recommend unless you want to upgrade both your graphics and sound cards.

Two boards from Artist Graphics didn't make the chart either. The $350 Artist 2000 (with 2MB of VRAM) and the $890 Artist 2000i (with 4MB of VRAM) feature good software and documentation. They even have built-in 3-D functions. But they're expensive, they didn't do well in our tests, and neither one accelerates full-motion video.

—Brad Grimes

TOP 10 GRAPHICS BOARDS

	Last ranking	Last reviewed	Street price	Overall rating	PC WorldBench graphics score	AVI playback (frames per second)	MPEG video playback quality	Chip/installed RAM (MB)/type	Reader service number	Comments
1 Matrox MGA Millennium 800/361-1408	1	June 96	$269	91	184	29	poor	MGA-2064W/ 2/WRAM	601	$60 price drop on fastest board we've tested; 3-D, DirectVideo support.
2 STB Powergraph 64 Video 800/234-4334	2	June 96	$209	87	175	10	good	S3 Trio64V+/ 2/EDO DRAM	602	Low cost; handles video well without DirectVideo; strong support.
3 Diamond Stealth64 Video 2201XL 800/468-5846	5	June 96	$197	87	176	9	excellent	S3 Trio64V+/ 2/EDO DRAM	603	New Win 95 software adds value; tech support is hard to reach.
4 Hercules Terminator 64/Video 800/532-0600	3	June 96	$179	86	172	8	good	S3 Trio64V+/ 2/EDO DRAM	604	Low cost; extensive utilities; performance is fine for everyday use.
5 Hercules Terminator Professional 800/532-0600	4	June 96	$279	84	178	10	good	S3 Vision968/ 2/VRAM	605	Good for graphics professionals (who might opt for an extra 2MB of VRAM).
6 Diamond Stealth64 Video 2201TV 800/468-5846	—	current	$269	82	175	9	excellent	S3 Trio64V+/ 2/EDO DRAM	606	Lets you watch TV on your PC without compromising graphics performance.
7 STB Velocity 64 Video 800/234-4334	6	June 96	$279	82	176	10	good	S3 Vision968/ 2/VRAM	607	Much like the Terminator Pro; good Win 95 software, strong support.
8 ATI Video Xpression 905/882-2600 ext. 1	9	June 96	$199	82	174	8	excellent	ATI-264VT/ 2/DRAM	608	Well built; slow at 1024 by 768; new TV tuner option ($99) boosts value.
9 Hercules Stingray 64/Video 800/532-0600	7	June 96	$189	81	173	9	good	Ark2000PV/ 2/EDO DRAM	609	Inexpensive; DirectVideo available on Web; no high refresh rates.
10 Number Nine 9FX Motion771 800/438-6463	8	June 96	$279	81	177	10	poor	S3 Vision968/ 2/VRAM	610	Decent speed for VRAM board; good utilities, highest refresh rates.

BEST BUY

Methodology We tested boards with PC WorldBench 1.0 at 800 by 600 resolution at 16.8 million colors (reported here) and at 1024 by 768 at 65,536 colors. For a description of the PC WorldBench tests, see the Test Report in this month's system review. We tested AVI video playback at 800 by 600 at 16.8 million colors using Microsoft's Media Player and an MCI command string that reports dropped frames. The clip was compressed at 320 by 240 at 16.8 million colors using Indeo 4.1. We played the clip at its native resolution and at twice its native resolution. We rated MPEG playback quality at 2X using the software player bundled with each board and compared quality to that of a hardware MPEG playback card. The overall rating includes ratings for performance (40 percent), features (30 percent), price (20 percent), and support policies (10 percent). For all ratings, higher is better. Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

Windows 95–certified Plug and Play.

For more information about all products in this table, circle reader service no. 901.

IT'S WHAT BLOWS OTHER PRINTERS AWAY.

The outer edge of printing is here.

Home & business gets extreme printing.

Killer 50MHz imaging processor boosts performance.

Does way more for way less.

Adobe® PRINTGEAR™

Posters, watermarks, N-up, duplex, booklets and more.

Check out Adobe PrintGear in the new NEC SuperScript™ 860.

www.adobe.com/print

www.nec.com

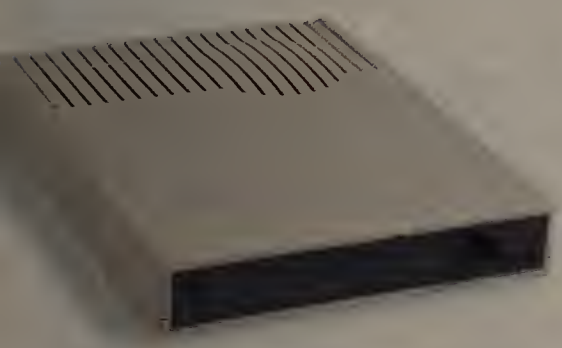
Affordable printers equipped with Adobe PrintGear are ready for anything you want to throw at them. Watch PrintGear help the new NEC SuperScript 860 do more and do it faster than any printer in its class. For more information about Adobe PrintGear call 1-800-833-6687 ext. G1679.

Adobe

Adobe and PrintGear are trademarks of Adobe Systems Incorporated. All other marks are the property of their respective companies. ©1996 Adobe Systems Incorporated. All rights reserved.

Circle 32 on reader service card

Megahertz XJack Changes Face, Stays in Place



THE PRICE IS NICER
With FlashROM and voice mail, Cardinal's MVP288XV is a lot of modem for $185, $24 less than last month.

Megahertz's latest PC Card modem, the XJ4288, premieres this month at number four, the same rank its XJ2288 predecessor held in June. Megahertz kept the exemplary features such as the internal XJack phone line connector and plain-English documentation, and added improved performance and cellular support.

Also on the PC Card list, a $15 price drop brings Microcom's TravelCard 28.8P up just enough to tie with the Zoom Telephonics V.34C Model 520, a Best Buy since March. And Hayes's Optima 288 now comes with toll-free tech support and security features, moving this already fine value to third place. The other PC Card modems we tested missed the chart by a wide margin. Eiger's EXF-2880P comes with no weekend or online support, and its manual is sparse. Digicom's Scout V.34 28.8 Fax Modem performed feebly and failed to install on our Windows 95 notebook.

The desktop chart is holding steady. The Microcom DeskPorte 28.8P again shares the Best Buy with the Motorola ISG Lifestyle 28.8. A price drop from $209 to $185 keeps the feature-rich Cardinal Technologies MVP288XV on the chart, despite competition from the new Zoom Telephonics V.34X External Fax/Data Modem. The V.34X has a limited features set but performs well and is only $169. The other new desktop modems we tested didn't fare as well. Logicode's Quicktel 2814XV has high connect rates but isn't Plug and Play compatible. Practical Peripherals' PC288MT has low connect rates. And the Amquest AM2814E Hypermodem's paltry feature set and poor documentation kept it well off the chart.

—Eric Hellweg and Bryan Hastings

TOP 10 MODEMS

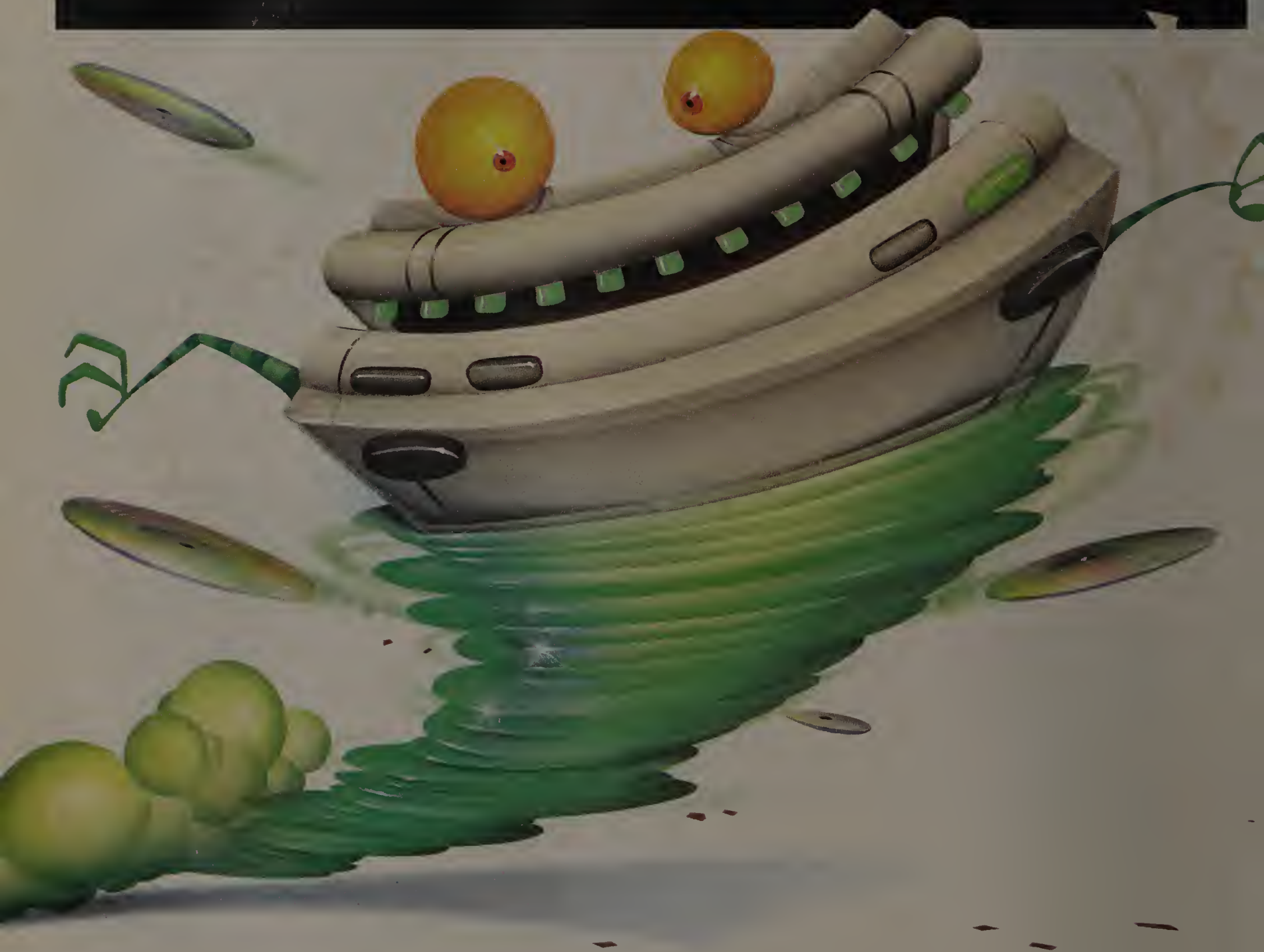
	Last ranking	First reviewed	Street price external/internal (ISA)	Overall rating	Throughput rating	Connect rating	Features, ease-of-use rating	Reader service number	Comments
DESKTOP									
1 Microcom DeskPorte 28.8P 800/822-8224	1	Apr 96	$215 / —	89	78	90	79	611	Great all-around modem. Serial port–only 28.8S model is a good alternative at $159.
2 Motorola ISG Lifestyle 28.8 800/566-3266	2	Mar 96	$200 / $175	89	85	97	69	612	No special features, but nice price and toll-free support. Usually connects at 28.8 kbps.
3 U.S. Robotics Sportster V.34 Faxmodem 800/342-5877	3	Nov 95	$219 / $199	88	83	90	78	613	Affordable, excellent performance, manual volume control.
4 Microcom DeskPorte Fast V.34 800/822-8224	4	Nov 95	$391 / —	86	75	90	88	614	Not cheap, but very easy to use. Plain-language display, toll-free tech support.
5 Cardinal Technologies MVP288XV 800/775-0899	5	May 96	$185 / —	86	75	82	78	615	Performance is so-so, but this feature-rich modem is $24 less than last month.
PC CARD									
1 Zoom Telephonics V.34C Model 520 800/666-6191	1	Mar 96	$199	88	74	90	77	616	Best price and performance, but installation will likely require a support call.
2 Microcom TravelCard 28.8P 800/822-8224	2	Feb 96	$259	88	77	80	78	617	$15 price drop nudges this excellent performer to a Best Buy.
3 Hayes Optima 288 V.34+Fax for PCMCIA With EZjack 770/840-9200	5	Feb 96	$269	87	79	72	79	618	Low connect rate at 28.8, but new security features and toll-free support move it up the chart.
4 Megahertz XJ4288 800/527-8677	—	current	$300	87	75	76	86	619	Successor to XJ2288 features higher connect rate and cellular connectivity.
5 MultiTech MultiModem LT 800/328-9717	3	Apr 96	$249	86	68	87	74	620	Alluring price, and it installs flawlessly. It's fast, too.

BEST BUY

Methodology We tested each modem using a pair of identical units, one at each end of a simulated public-service telephone network. We tested throughput and connect rates using a variety of file types and line conditions. We tested PC Card installation on a Latitude XPi P75D provided by Dell. We used vendor-supplied initialization strings. The more expensive a modem, the more importance we give price in the unit's overall rating. The overall rating includes ratings for price (3 to 20 percent), features and ease of use (32 to 38 percent), performance (40 to 46 percent), and support (8 to 13 percent). Data based on tests designed and conducted by the PC World Test Center. All rights reserved.

For more information about all products in this table, circle reader service no. 902.

It's What Makes Your CD-ROM Spin.



SCSI. The cool connection for hot peripherals.

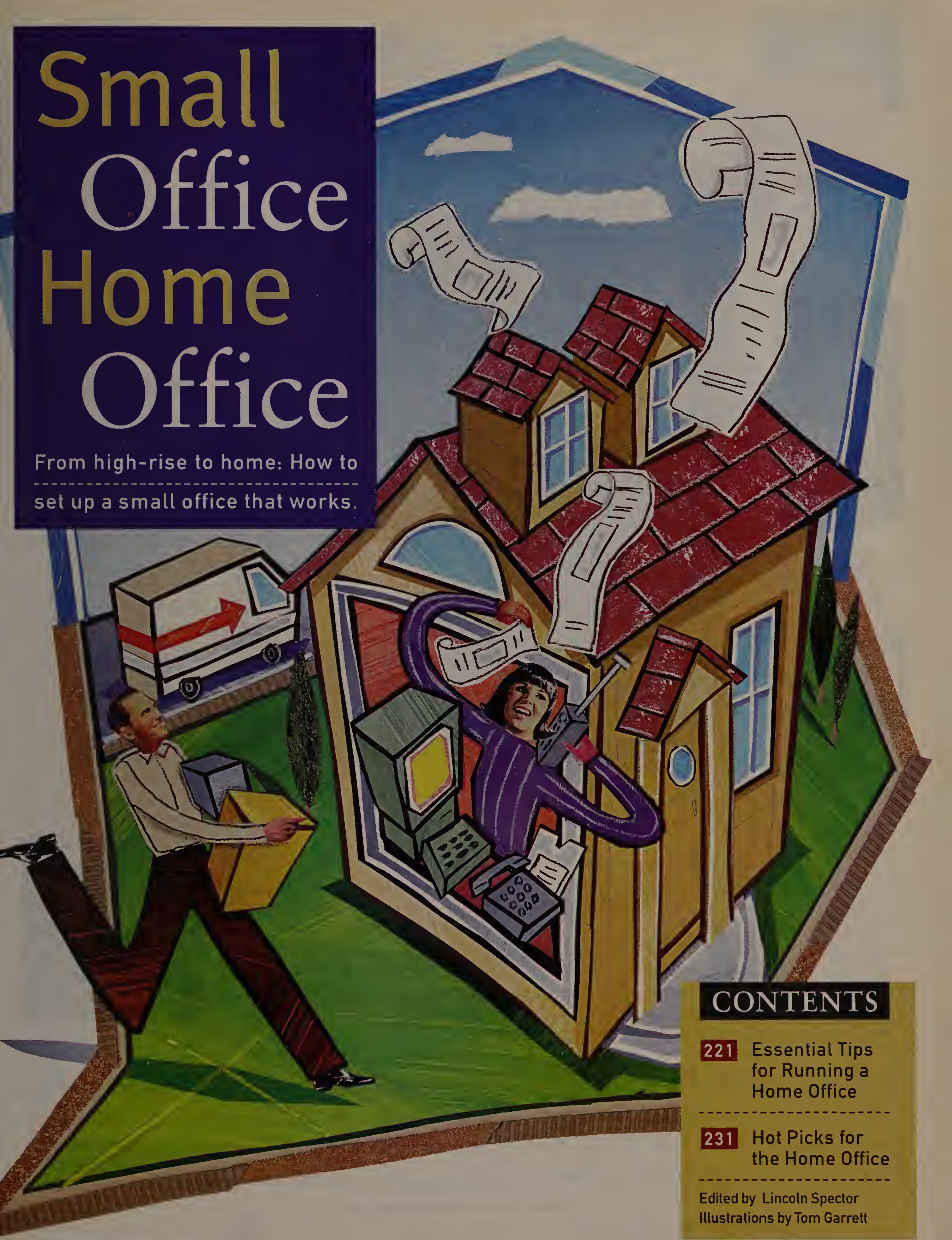
SCSI (pronounced scuzzy) CD-ROMs run circles around anything else. They're also the fastest, easiest CD-ROMs to install. In fact, SCSI is the only way to connect an external CD-ROM. These are just a few of the reasons to give your PC a SCSI connection. To learn more about Adaptec® SCSI host adapters, solutions starting at $69.00, or to enter to win a free SCSI peripheral,† call 1-800-655-3977 ext. 5547 or visit our home page at www.adaptec.com*

adaptec®

†Register and request a copy of official rules and sweepstakes details. Ends 8/31/96. Limit one entry per legal US resident. No purchase necessary. *For information by fax, dial 1-408-945-2570, ext. 5547, request document no. 14070. ©1996 Adaptec, Inc. All rights reserved. Adaptec and the Adaptec logo are trademarks of Adaptec, Inc., which may be registered in some jurisdictions. All other trademarks used belong to their respective owners.

Small Office Home Office

From high-rise to home: How to set up a small office that works.



CONTENTS

221 Essential Tips for Running a Home Office

231 Hot Picks for the Home Office

Edited by Lincoln Spector
Illustrations by Tom Garrett

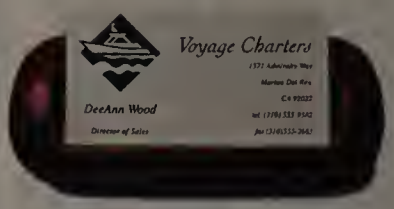
Avery Ink Jet Labels
White and Clear

Avery Laminated & Regular
Rotary Cards

Avery Laser or Ink Jet
Note Cards

What good is having technology if you don't take advantage of it?

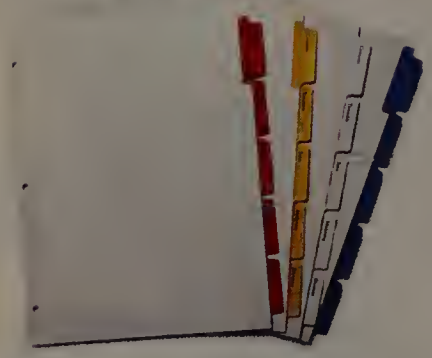
Avery Laser
Videotape Labels



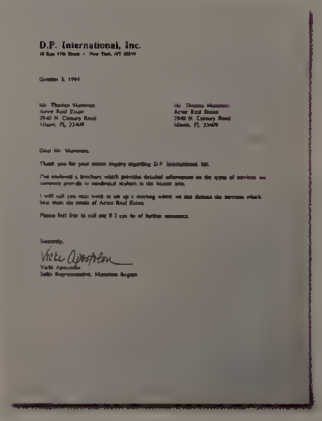
Avery Laser or Ink Jet
Business Cards

Avery Laser
Audio Tape Labels

Avery Laser or Ink Jet
Diskette Labels



Avery Index Maker® Dividers
Laser or Ink Jet



Avery LETTER
'N LABEL™
Quality Bond
Paper and
Address Label
in One

Avery Laser
or Ink Jet
File Folder
Labels

You paid all that money for all that technology, it's time you got your money's worth. Avery® has a full line of products that let you make better use of your laser or ink jet printer. They'll keep you organized and working more efficiently, easily. In fact, Avery formats are already in the software you're using. We'll even send you a free sample kit while supplies last. So give us a call. And start getting more out of your printer.

Circle 15 on reader service card

FOR A FREE SAMPLE KIT, CALL TOLL FREE:

1-888-283-7972 ext. 961

AVERY®

Essential Tips for Running a Home Office

BY MICHAEL S. LASKY

No staff? No problem. Here's how to keep your office in shape.

The first day I started up my home office, I never felt more exhilarated. Or so completely alone.

You see, running an office is a lot harder than working in one. Suddenly you have no backup, no support staff, and hundreds of dilemmas: What's the best way to keep track of expenses and hours? How do you create the illusion that you have an office with a secretary and not a retrofitted garage with a telephone? Is there really a way to file papers so you can find them again quickly? How do you get insurance coverage for your computer equipment without going broke on the premiums?

Here are a few tricks I learned—many of them the hard way—for getting over these hurdles.

Make a Single Phone Your 'Switchboard'

How could I coax the sort of functionality out of my telephone and answering machine that I had learned to expect in an office with a switchboard, a receptionist, and a fancy voice-mail system? And how could I make my telephone and answering machine sound to my clients like a switchboard, a receptionist, and a fancy voice-mail system?

I found that the latest phone technology offers many ways to create that busy-office facade while giving my productivity a helpful boost. Voice-mail systems let you create multiple mailboxes—say, one for clients, another for subcontractors, and another for suppliers—giving you an instant handle on the messages you need to access first and making it sound as if you've got a large office. And the call forwarding means important calls will get to you when you're away.

TIP Use call forwarding. For about $5 extra a month, your local phone company will let you forward your incoming calls to another number. It could be to your current job site, to a homebound person who can field your calls, or to a telemarketing center that specializes in answering customer queries.

TIP Get a better answering machine. Tapeless digital answering equipment has become both versatile and affordable. For example, the $169 Bogen Friday Communications Manager gives you seven announcements—four of which the caller can respond to—and call forwarding that bypasses your phone company. And you can even attach it to a radio to play hold music.

If you need to cut desktop clutter, consider buying a phone with voice messaging built-in. For $180, Lucent

I commute from Seattle to Boston in seconds.

I got an offer to run a satellite sales office.

But there was a catch — a 3,000 mile catch.

I couldn't bear the thought of leaving home.

Fortunately, my company liked the idea of telecommuting. And that's when I got my Acer® Aspire™ 2550 Minitower. It takes me from home to headquarters in seconds. It has online software and a powerful fax modem that lets me e-mail my executive summaries to corporate on time. Plus, a large hard drive, a high-speed CD-ROM drive and stereo speakers that really jazz up my multimedia presentations.

And because my Aspire 2550 Minitower has an Intel® Pentium® processor, I have just as much computing power as my colleagues at the office.

Now I can have my latté at work just the way I like it—while working from home.

Aspire. To Do More.

A few more things I can Aspire to do:

Order dinner from a local restaurant.

Negotiate contracts online.

Manage my company stock options.

Keep up with my business journals.

Comparison shop for designer clothes.

And cruise the Internet.

ACER *Everything You Aspire To.*

Acer and the Acer logo are registered trademarks and Aspire is a trademark of Acer America Corporation and Acer Inc. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. Microsoft, Windows and Windows logo are registered trademarks of Microsoft Corporation. All other brands and product names are trademarks or registered trademarks of their respective companies. © 1996 Acer America Corporation. All rights reserved. Specifications vary by model and configuration, are subject to change without notice, and not all models/colors available at all retail locations. See your local retailer for more information and details on Acer's Limited Product Warranty.

intel inside pentium PROCESSOR

Designed for Microsoft® Windows® 95

For the location of the Acer dealer nearest you, call 1-800-529-ACER. Or visit us on the World Wide Web at http://www.acer.com/aac/

Technologies sells the Digital Answering System Speakerphone, a telephone with messaging features similar to the Bogen Friday's (but without the hold music). Callers can leave messages in up to four different mailboxes, each with its own announcement. And it can automatically dial the forwarding number you've specified, without telling the caller.

Another way to clear your desk of single-function gizmos and get phone, voice mail, and fax is to buy Connectware's $299 PhoneWorks 28.8, an add-on board for PCs that integrates a full-duplex speakerphone, comprehensive fax features, and a voice messaging system. The card features Caller ID support functions as well as paging to specified phone numbers. You can make your calls on the included boom microphone or with your regular phone. PhoneWorks connects easily to an existing sound card and speakers.

And because these systems don't use tape, you can randomly access your messages and selectively save and delete them.

TIP Caller ID service lets you know who's calling *before* you answer. Now available nationally, Caller ID shows the phone number of incoming calls on either the phone or a special Caller ID add-on unit. When combined with the right software, Caller ID can automatically route calls from particular phone numbers to appropriate voice mailboxes or prerecorded messages. With a full-duplex modem or sound card and the right software, it can even pull up a client record (if the incoming call is from a phone previously logged) on your computer screen before you pick up the phone.

Algo Communications' $89.95 PC Phone Manager (for Windows 3.1 and 95) integrates Caller ID with various contact managers and personal information managers, such as Act, Lotus Organizer, and Sidekick, automatically opening your PIM to the appropriate name when the phone rings. Any information you have on the caller will pop up, helping you decide between answering the call or leaving it to voice mail. Combined with call forwarding, the product lets you selectively send incoming calls to another number. And the PC Phone Manager also logs incoming and outgoing calls—useful for charging phone expenses to a client's bill.

Although numerous Caller ID phones and add-on boxes are available, some standout products truly exploit the feature. For example, Northern Telecom offers the Meridian 9516, a combination Caller ID phone and tapeless digital answering machine that costs less than $300 and actually announces who is calling, thanks to its built-in synthesized voice and programmable database of names and numbers. It also keeps a record of calls (great for call auditing) and allows you to choose which of your waiting messages you want to hear first. You can create up to 75 personalized greetings for different callers identified by incoming phone number.

The right phone can take the place of an office switchboard and receptionist.

TIP Use a commercial answering service. If you need to be on call but don't want to hand out your pager number or can't divulge your off-site location, this is your best bet. When someone calls your number, they get a receptionist who takes the message and, if it's urgent, contacts you—all for as little as $60 a month. But be warned: Although answering services offer that needed human touch, they also can put off callers who want to leave a personal or detailed voice-mail message and would therefore prefer a machine. To help with this problem, some services now offer voice mail to callers.

I assumed my home office was covered through my renter's insurance, but I was wrong.

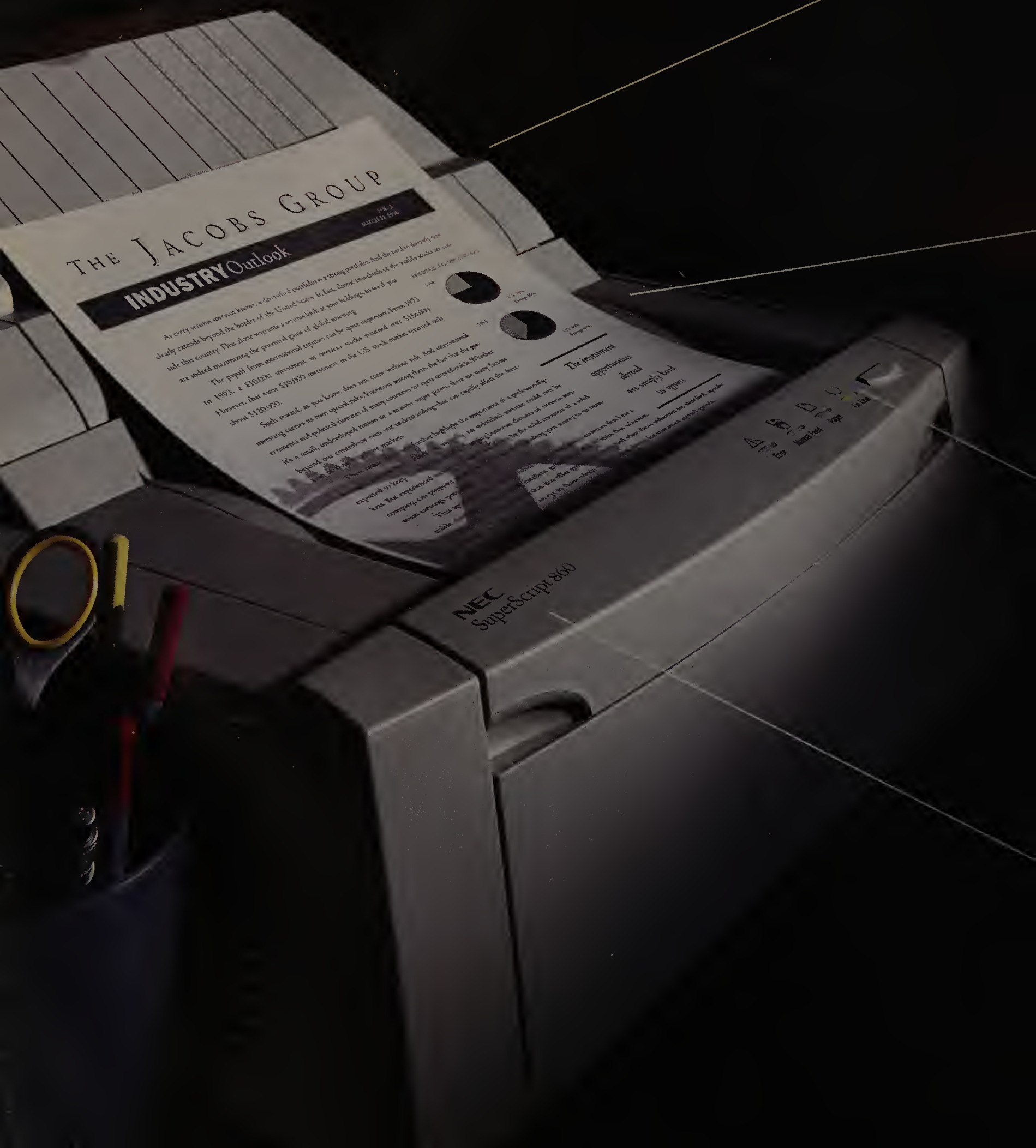
Making (Client) Tracks

Even with just a few clients, I found it difficult to log the hours I spent working for each and then tally and separate my individual expenses for each client. But there are ways.

TIP Use client tracking and billing software. My favorite is TimeWin 1.2.1, a $49.95 shareware package that gives you an interface similar to Windows 3.1's File Manager for viewing and assigning where you bill your time. You can separate your billable hours into different projects, letting the program generate an invoice with those project hour breakdowns. You'll find TimeWin as timewin.zip on PC World Online.

If you prefer retail packages, I'd recommend either Timeslips Personal Plus or Responsive Time Logger 2.0. Both offer robust, easy-to-master features tailored to a small office's need to track hours

RECENTLY, WE ASKED OUR CUSTOMERS WHAT THEY EXPECT FROM A $500 PRINTER.



01

"Easy envelope printing."

"Larger toner capacity."

"8 pages per minute."

"Booklet printing."

APPARENTLY, THEY EXPECT A $1000 PRINTER.

INTRODUCING THE $500* NEC SUPERSCRIPT™ 860 LASER PRINTER.

When it comes to computer equipment, small business owners don't expect to get what they pay for. They expect to get a lot more than they pay for. And that's exactly what the NEC SuperScript 860 delivers. For about $500, it offers outstanding 600 dpi resolution, as well as a long list of features you'd normally find on printers costing twice as much.

Say you've got a proposal due the next day. No problem. The SuperScript 860 can quickly print everything from your transparencies to a special proof sheet that lets you lay out your entire proposal. We've even included our Solutions CD which helps you make all your documents look as professional as possible. Plus, the SuperScript 860 comes with an overnight replacement warranty† and it's the first printer ever to offer Adobe® PrintGear™ technology.

Just call 1-800-NEC-INFO to find out more about the NEC SuperScript 860. The perfect laser printer for those whose expectations are higher than their budget.

- *8 pages per minute*
- *True 600 dpi with NEC Sharp Edge Technology*
- *Adobe Memory Booster™*
- *Windows® 95, Windows® 3.1x and DOS*
- *FREE Internet In A Box™ software*
- *200-sheet paper capacity*
- *Proof sheet (n-up) printing*
- *Custom watermark capabilities*
- *2-year overnight warranty*
- *Plus much more*

CIRCUIT CITY. COMPUSA. THE COMPUTER SUPERSTORE. STAPLES The Office Superstore

*Estimated street price. †Some restrictions apply to the overnight replacement warranty. For more information via fax, call NEC FastFacts™ at 1-800-366-0476 and request document #778600. SuperScript, FastFacts and See, Hear and Feel the Difference are trademarks of NEC Technologies, Inc. All other trademarks and registered marks are property of their respective owners. ©1996 NEC Technologies, Inc.

Key #85514

SEE, HEAR AND FEEL THE DIFFERENCE.™ NEC

Circle 163 on reader service card

Visit our new web site at http://www.nec.com

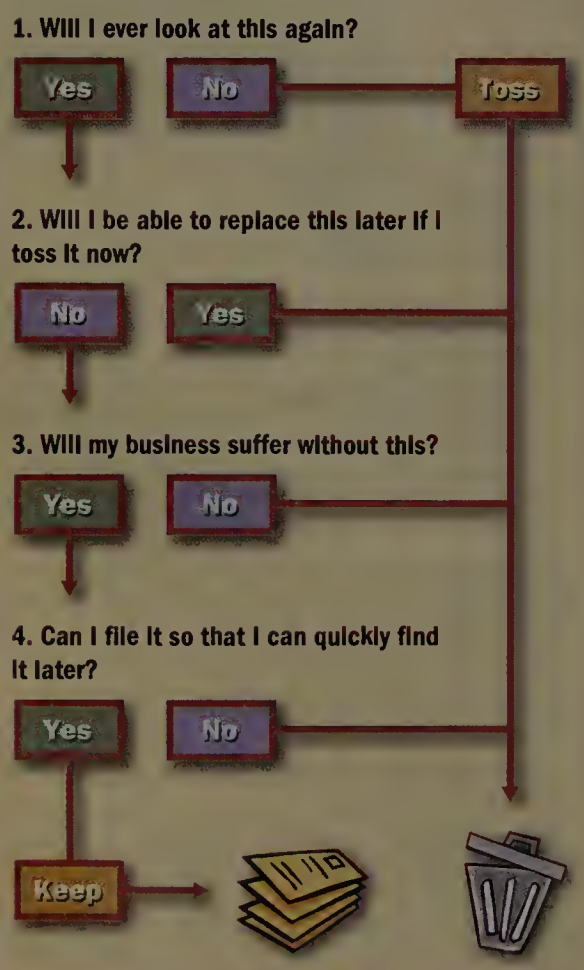
and expenses per client and project, and each is available for under $100. All three products work in Windows 3.*x* and Windows 95.

TIP Request Call Organizer service from your phone company. Long-distance phone calls billable to various clients are easy to track with the Call Organizer service available from AT&T, Sprint, MCI, and many local carriers. For about $2.50 a month, you can add a two-to-four-digit code following each phone number dialed, each code representing a different client. When your bill comes, it's broken out by code number into distinct groups for easy attachment to the invoices you bill to each client. You also have the option of getting your phone bill on a floppy, letting you plug the calls and respective charges into an invoicing program or a spreadsheet.

Software can help you track the time you spend working for particular clients.

What Papers Should You Toss?

Don't keep papers you can throw away. Follow this four-part test from Lisa Kanarek (author of *Organizing Your Home Office for Success*) to decide if a piece of paper should live or die.



Filing Away the Hours

I had only a handful of clients but already my desk was engulfed by paper. I hadn't seen the "natural mahogany finish" in weeks. I bought a four-drawer filing cabinet, but what I really needed was a way to organize my papers so I could find them without organizing a search party.

TIP Never store your papers flat. "Papers are easier to find when stored vertically in files," notes Lisa Kanarek, author of *Organizing Your Home Office for Success* (Plume/Penguin, 1993, 800/253-6476, $10.95). When new records and reports come into the office, keep them flat for as short a time as possible, preferably in a stacking bin pending your "file 'em or dump 'em" decisions.

TIP Don't get sentimental. When you go through your horizontal stack, file only those papers that you have a very good reason to save. Simply recycle or throw out the rest.

TIP Separate business and personal papers. While the urge to consolidate your paperwork might be enticing, filing personal and business papers together will be a nightmare come tax time. And in general the more papers you have in the same folders, the more time it takes to find what you're looking for.

TIP Use colored file folders. The actual way you decide to file papers—alphabetically by client, numerically by job order number, categorically by subject, or what have you—depends on your particular business needs. No matter what method you adopt, use either colored file folders or colored dot labels to arrange your files for easy, on-sight retrieval. The colors can, for example, represent the type of project or client or the stages of job completion. This suggestion was probably the one I got most frequently from home office professionals in CompuServe's Working From Home Forum (go work).

Security Surprises

I assumed I had insurance coverage for my home office because I had renter's insurance. But such was not the case. Home offices, I discovered, are not covered under homeowner's or renter's insurance for liability, fire, and theft. You need either a *separate policy* or a *rider* to your current one. And when you consider that PC theft has risen to more than a billion dollars a year, according to computer insurance specialists Safeware, such coverage is a must.

The next surprise was discovering that few insurance companies are willing to provide insurance for offices (particularly home offices) full of computer equipment. Luckily, other options are available.

TIP Join a home office professionals group. The Home Business Institute (914/946-6600) now has 40,000 members nationwide. Many join just for the insurance benefits, which currently include a minimum commercial policy covering $5000 in property loss and $300,000 in liability for a $150 annual premium. Mem-

PENTIUM PUNCH.

75MHz PENTIUM® PROCESSOR
With this quick-thinking Pentium processor and 8MB of fast EDO RAM, you'll run all your applications with ease.

PC MAGAZINE "A" RATING
Toshiba gets the "A" rating for service and technical support. So wherever you are, you can be confident we'll be there, too.

PC MAGAZINE

BUILT-IN POWER SUPPLY
The days of bulky, hard-to-pack AC adapters are over. All you need is this cord.

KNOCKOUT PRICE.

THE SATELLITE® SERIES. THE VALUE OF POWER. Get the quality of a Toshiba and the power of a Pentium processor without taking a financial hit. The Satellite Series offers a huge 10.4" color display to help you work comfortably, 8MB of lightning fast EDO RAM, and a high-capacity 528 million byte hard disk drive to hold everything you need when you're on the road. It's a real knockout. Call 1-800-457-7777 for more information or a dealer near you.

$1799 *(100CS)*

Satellite®
100CS*:
- 75MHz Pentium® processor
- 10.4" dia. color DSTN dual-scan display
- 528 Million Byte (=504MB) HDD
- 8MB EDO RAM expandable to 40MB
- 16KB cache
- VL local-bus video
- Two stacked PC Card (PCMCIA) slots (two Type II or one Type III)
- Plug and Play Connectivity
- Built-in AC adapter
- Accupoint™ integrated pointing device
- Optional NoteDock™ Enhanced Port Replicator
- 3.5" floppy disk drive
- 6.9 lbs.
- Pre-installed software: Windows® 95 or MS-DOS® with Windows 3.11
- Toll-free technical support – 7 days a week, 24 hours a day

Designed for Microsoft® Windows® 95

intel inside pentium™ PROCESSOR

In Touch with Tomorrow
TOSHIBA

The World's Best Selling Portable Computers.

©1996 Toshiba America Information Systems, Inc. All prices, specifications and availability are subject to change. *The 100CS is sold at selected resellers as the 105CS with Windows® 95 and additional pre-installed software. All products indicated by trademark symbols are trademarked and/or registered by their respective companies. Intel Inside and Pentium Processor Logos are trademarks of Intel Corporation.

Circle 233 on reader service card

You Sleep, Your Office Doesn't

When I close up shop for the night and make that long commute to the living room, my office keeps working. Yours can, too. Take a few hints from my midnight maneuverings:

Use fax broadcasting to get your message out. My Espresso Personal Communications Manager may look like a small nuclear power plant, but it actually is quite efficient: Come midnight it automatically broadcasts marketing solicitation faxes to prospective clients, freeing it for other work during office hours and keeping my phone costs down. When it's connected to my computer—it works fine on its own as well—I can retrieve and view faxes from a remote PC, configure it for fax on demand, and broadcast faxes.

Schedule backups to protect your data. If it's Tuesday, the data on my hard disk is being copied onto my Colorado 700 Tape Drive. You can use any number of available backup solutions. But do it regularly—at least weekly—and keep the backup media in a safe place off site.

Collect your e-mail at night. While I sleep, my PC calls America Online, CompuServe, and my Internet service provider to download new messages. In AOL, you can select *Mail • FlashSession* to coordinate automatic e-mail sweeps and file downloads. CompuServe's Navigator add-on (go cissoft) performs the same functions. To claim your Internet e-mail when you're not there, there's the free Eudora Light (the more powerful Eudora Pro costs $89).

Control your office computer remotely. With Server Technology's Power On/Off box, I can power up or turn off my PC from any phone in the world and use it with remote software. If for some reason it locks up, I can sequence a power off, 30-second wait, and power on to get it up and running again.

• **Espresso Personal Communications Manager** $299; Beond Communications, Inc.; 800/310-9595 **Reader service no. 661**
• **Eudora Light** free, **Eudora Pro** $89; QualComm; 800/238-3672; http://www.qualcom.com/quest **Reader service no. 662**
• **Power On/Off** $169; Server Technology, Inc.; 800/835-1515 **Reader service no. 663**

bership dues are $49 a year, but a six-month trial is available for only $19.95. The dues are well worth it, considering the other benefits, which include telephone savings, life and medical insurance, computer support, and debt collection services. Another group, the Independent Business Alliance (212/513-1446), also offers worthwhile insurance plans for its members.

TIP Buy separate computer insurance. Safeware (800/848-3469), an insurance company based in Columbus, Ohio, that specializes in computer insurance, will write you a policy that covers just your computer equipment. Rates start at a $49 annual premium for $2000 of coverage and slide to $159 for up to $17,000 of equipment protection.

TIP Be prepared for burglars. It still pays to invest in prevention. Burglars are usually in a hurry, and anything that slows them down could discourage them from taking your business elsewhere. Secure-It's $49.95 Kablit cabling package includes a 10-foot cable and lock that thread through the computer and peripherals and then around your desk. A burglar would have to be a Houdini to take your computer.

TIP Have proof of ownership. If you are robbed, you'll have to be prepared for the inevitable requests for proof of ownership the insurance company will throw at you. You can either videotape your equipment or photograph each item and attach the pictures to copies of corresponding receipts. Or you can use a simple log that lists each item's date of purchase, serial number, and price. In any case, store this proof in a safe deposit box, not at your office.

PC WORLD online *The files in this article are available on PC World Online. Michael S. Lasky is a senior associate editor for* PC World.

For more information about all products in this article, circle reader service no. 906.

Where to Buy

• **Bogen Friday Communications Manager** $169; Bogen Communications; 800/942-6436 **Reader service no. 652**
• **Digital Answering System Speakerphone** $180; Lucent Technologies; 800/222-3111 **Reader service no. 653**
• **Kablit** $49.95; Secure-It; 800/451-7592 **Reader service no. 654**
• **Meridian 9516** $270; Northern Telecom; 800/466-7835 **Reader service no. 655**
• **PC Phone Manager** $89.95; Algo Communications; 214/490-5487 **Reader service no. 656**
• **PhoneWorks 28.8** $299; Connectware, Inc.; 800/357-0852 **Reader service no. 657**
• **Responsive Time Logger 2.0** $79; Responsive Software; 800/669-4611 **Reader service no. 658**
• **Timeslips Personal Plus** $99.95; Timeslips Corp.; 800/285-0999 **Reader service no. 659**
• **TimeWin 1.2.1** $49.95 registration fee; Thunder Creek Software; 403/264-0854, 403/225-0352; mcneillb@cuug.ab.ca **Reader service no. 660**

Okidata makes a full line of Windows, DOS and Adobe™ PostScript™ compatible personal business printers. We have 24 years and over 9 million printers worth of experience. Start something. Start anything. We'll finish it. For a full spec sheet, call Fax Back 1-800-654-6651. Ask for document 1014.

*Estimated retail price in the U.S. Actual price may vary. System requirements: 8 MB PC RAM & 8 MB free space on hard drive; Windows 3.1, 3.11, or Windows 95. ©1996 Okidata Reg. T.M., M.D. Oki Electric Industry Co., Ltd. They're your ideas. We just help. T.M. Oki America, Inc. Adobe, PostScript T.M. Adobe Systems, Inc. Windows Reg. T.M. Microsoft Corp.

Only one database makes your life easier without making it absolute dreck first.

FILEMAKER PRO 3.0. THE ONLY RELATIONAL DATABASE DESIGNED FOR BUSY BUSINESS PEOPLE, NOT GEARHEADS.

Business is booming and you could use a database. But the thought of putting your business on hold while you figure one out doesn't exactly thrill you. That's why there's FileMaker® Pro 3.0 for Windows. Whichever version of Windows you're running – Windows 95, NT or Windows 3.1 – you can get the job done easier with FileMaker Pro. Just open up the box and start running your business like a well-oiled machine.

FileMaker Pro 3.0 has the features you need. It's got a complete set of database templates to get you started, powerful mail merge capabilities, new word processing improvements, and automatic phone dialing. Its ScriptMaker® feature lets you automate routine task and menu commands, helping you be even more efficient. And its built-in networking support allows many users to share a database simultaneously, even over the Internet.

If you want a database that helps sort out your business without putting you out of sorts, your decision is clear: FileMaker Pro 3.0 for Windows.

For more information, visit your nearest reseller, call Claris at 1-800-293-0617 ext. 1156, or visit us on the Web at www.claris.com

FILEMAKER PRO WOWS CRITICS, WINS HEARTS.

"Claris truly supports our ability to be cross-platform and gives us flexibility to choose which Windows environment works best for us."
–Andrew Dyer, Time Magazine's Technology Manager

"Claris FileMaker Pro 3.0 is one of the few end-user databases that actually lives up to its claims of simplicity."
–PC Computing, 4/96

CLARIS®

Simply powerful software.

In Canada, please call 1-800-[illegible]

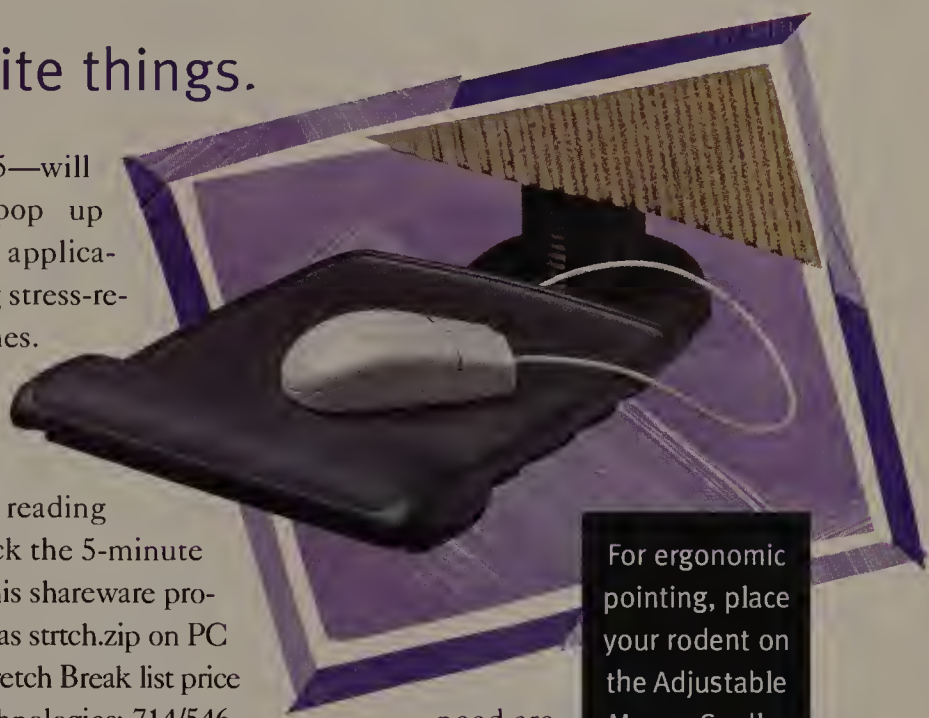
© 1996 Claris Corporation. All rights reserved. Claris, FileMaker, [illegible] registered trademarks and Simply Powerful Software is a trademark of Claris Corporation in the [illegible] and other [illegible]ies. The Mac OS logo is a trademark of Apple Computer, Inc. Microsoft is a [illegible] and Windows [illegible] Windows logo are trademarks of Microsoft Corporation. All other [illegible] are property of their respective owners.

Hot Picks

BY STEVE BASS

for the Home Office

These are a few of our favorite things.



For ergonomic pointing, place your rodent on the Adjustable Mouse Cradle.

Mouse on a Pedestal

I found just the right home for my mouse: an adjustable, swiveling pad that sits on a metal arm attached to the bottom of my desk. The arm pivots left and right up to 30 degrees, following my hand like a trained, umm, mouse. A bit of a pain to install if you hate crawling underneath your desk, the Mouse Cradle has a large surface, about 8.5 by 8 inches, with a comfortable wrist rest at the edge. Ergonomically, it's ideal because its height is adjustable in quarter-inch increments, and it slides—mouse and all—under the desk when not in use. Adjustable Mouse Cradle street price $49.95; Ring King; 800/553-9647, 319/263-8144, 800/272-2382 (fax).

Reader service no. 664

Take a Break and Stretch

After a day at the computer, your back aches, your shoulders are sore, and your neck's tight. So relax your muscles with Stretch Break. At intervals that you set, this Windows 3.*x* program—which runs fine on Windows 95—will automatically pop up over your other applications, displaying stress-reducing stretches. And if you're in the middle of something really important (say, reading *Dilbert*), just click the 5-minute delay button. This shareware program is available as strtch.zip on PC World Online. Stretch Break list price $24.95; Para Technologies; 714/546-8619, 714/546-4607 (fax); 72317.726@compuserve.com.

Reader service no. 666

FedEx Finder

The airbills are in the trash and my pen's in the drawer. That's because I now use my computer to ship all my Federal Express packages. Just fill in the on-screen form, and a click later FedEx Ship uses my modem to call in the information *and* request a courier. Then I use the program to print a bar coded, plain-paper shipping document and receipt. Later, I can use real-time tracking to determine if the package has arrived—or where in the world it is. The free software is available both online and by mail—all you need are a FedEx account and a modem. It works with Windows 3.*x* and Windows 95. By the time you read this, you should be able to fill out the form right on FedEx's World Wide Web page; you can already check a delivery's status there. FedEx Ship free; 800/463-3339; http://www.fedex.com.

Reader service no. 665

FedEx Ship: the next best thing to e-mailing packages.

Audio at Your Fingertips

Don't have room on your desk for speakers *and* a keyboard? Okay, how about a keyboard with a pair of Altec Lansing speakers built-in? How about adding a hands-free omnidirectional microphone, a volume control knob, and a headset jack—all at a street price of about $79? We're talking about Maxi Sound, a full keyboard that ends desktop clutter while bringing audio to your desktop. The 3.5-watt Lansing speakers are no audiophile's dream, but they're fine for most multimedia applications. The keyboard itself has a good, crisp, solid feel—although the volume control is a bit sticky—and the whole thing in-

cludes a two-year warranty. To keep wiring down, one cable connects the keyboard to your computer and the speakers to the sound card. And if no one's listening, you can even sneak in an occasional *Gilligan's Island* sound clip. Maxi Sound list price $89; Maxi Switch; 520/294-5450, 520/294-6890 (fax).

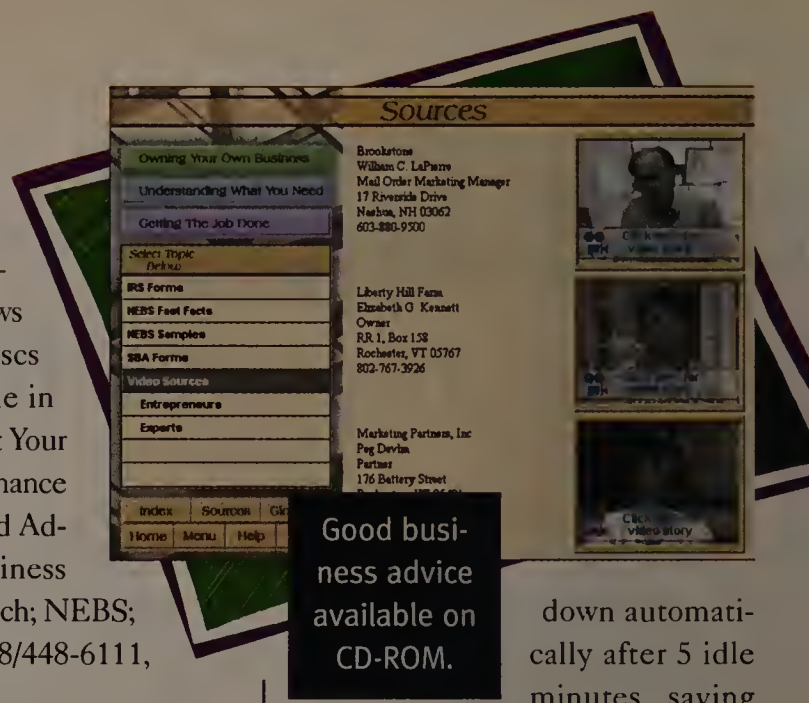
Reader service no. 667

Small-Business Jump Starts

Up in the air about starting your own business? Here are three interactive CD-ROMs filled with the kind of rock-solid information every new business needs. Start with the aptly named Start Your Own Business, which tells you all about the riskiest—and safest—businesses to start, the ins and outs of permits and licenses, how to find the right insurance, and ways to keep your precious ideas protected. Before you open your doors, get a financial kick start with Finance Your Business. You'll learn what lenders want to hear, discover methods for projecting long-term costs, and pick up techniques to measure the profitability of your new enterprise. If you need help with marketing, Advertise Your Business supplies advice in such areas as copywriting ads, Yellow Pages advertising, strategies for those on shoestring budgets, and trade show promotions. Designed for Windows 3.*x*, all three discs also work just fine in Windows 95. Start Your Own Business, Finance Your Business, and Advertise Your Business list price $49.95 each; NEBS; 800/882-5254, 508/448-6111, 508/448-2369 (fax).

Reader service no. 668

Seiko's Smart Business Card Reader is a small scanner that does one job very well.



Good business advice available on CD-ROM.

Pick a Card, Then Toss It

Your desk is littered with business cards that really belong in a database. Enter Seiko's Smart Business Card Reader, a sleek-looking miniscanner that takes up about as much desk space as a can of soda. This device can scan a business card in 15 seconds, converting characters into data for its own contact database, which easily exports to many popular contact managers, including Act, PackRat, GoldMine, and Maximizer. On the downside, the Card Reader doesn't read every card perfectly (angled and low-contrast text didn't fare well at all), and it requires a serial port all to itself (haven't these people heard of parallel pass-throughs?). Smart Business Card Reader street price $199; Seiko; 800/688-0817, 408/922-5900; slp_info@seikosj.com.

Reader service no. 669

A Copier for the Rest of Us

Instead of schlepping to the local Kinko's, I get instant photocopies with the Canon 720. It cranks out a fast 8 copies per minute from its 250-sheet tray. You can enlarge or reduce copies from 70 to 141 percent, in 1 percent increments, and the copies are sharp thanks to a stationary platen. The copier uses a single cartridge that combines the drum, development unit, and toner, making it easy to replace parts. Another plus: It's Energy Star compliant, shutting down automatically after 5 idle minutes, saving me money and not overheating my small office. Canon PC 720 Personal Copier street price $699; Canon; 800/652-2666, 714/438-3317 (fax); http://www.usa.canon.com.

Reader service no. 670

Power to the PC

My data and I have been through a lot together, including a blackout and a wild, file-destroying power surge. I finally wised up and got the UPStart, a slim, LED-bedecked surge protector and uninterruptible power supply that fits neatly beneath my monitor. The UPStart kicks in during a power loss, saving open files and gracefully shutting down the system after a minute or so. Its five power outlets are arranged so I can plug in several bulky transformers at once. My only complaint: UPStart hogs a serial port, so if your mouse and modem need the two that come with your PC, you're stuck. UPStart All-in-One Power Center street price $200; SL Waber; 800/634-1485, 609/866-8888.

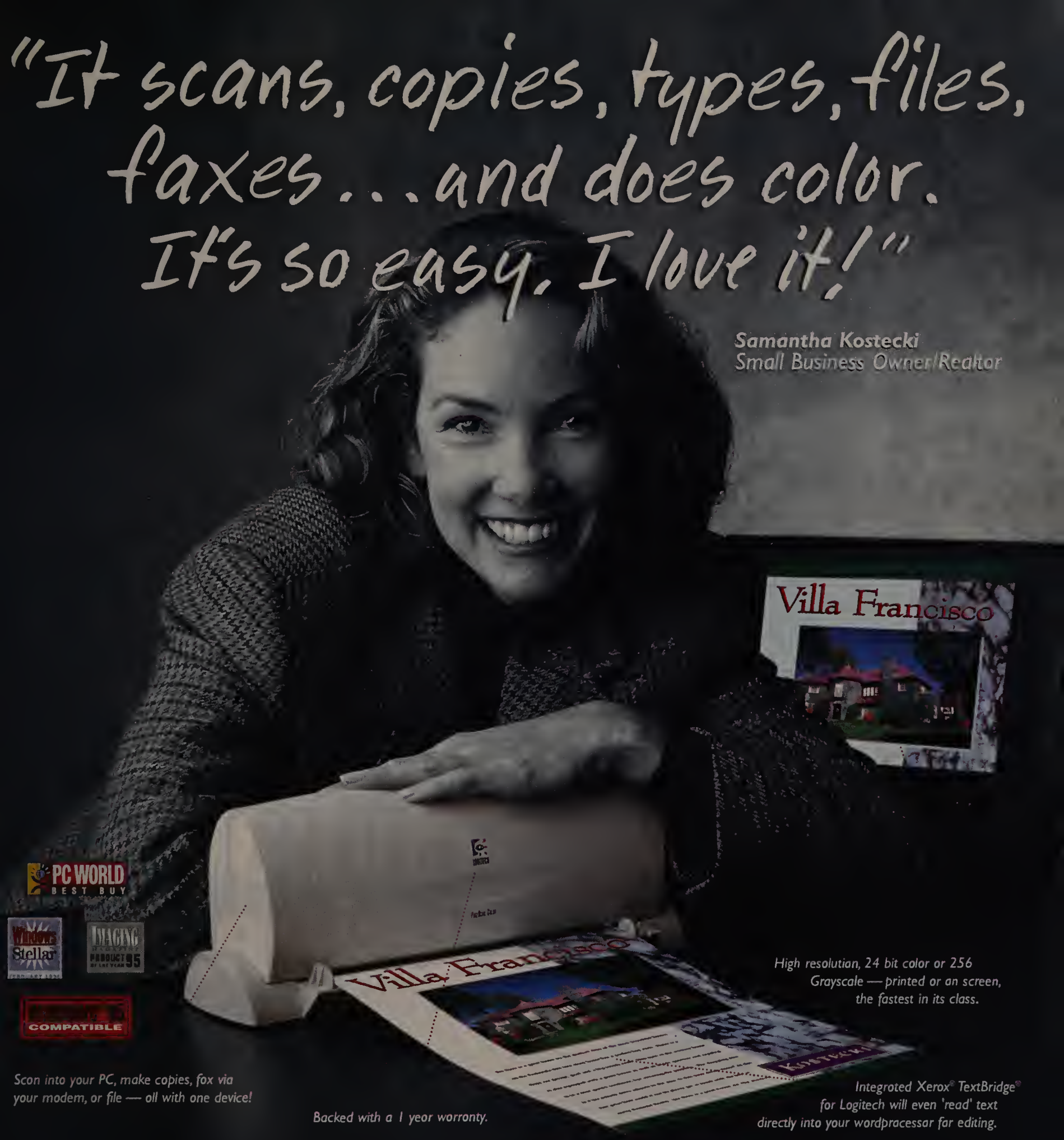
Reader service no. 671

PC WORLD online *The files mentioned in this article are available on PC World Online. Contributing Editor Steve Bass is president of the Pasadena IBM Users Group. He can be reached on PC World Online. See page 14 for contact information.*

For more information about all products in this article, circle reader service no. 907.

"It scans, copies, types, files, faxes...and does color. It's so easy. I love it!"

Samantha Kostecki
Small Business Owner/Realtor



High resolution, 24 bit color or 256 Grayscale — printed or on screen, the fastest in its class.

Scan into your PC, make copies, fax via your modem, or file — all with one device!

Backed with a 1 year warranty.

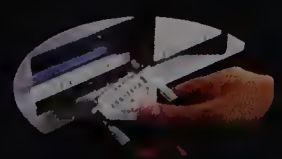
Integrated Xerox® TextBridge® for Logitech will even 'read' text directly into your wordprocessor for editing.

Whether you manage a small office, home office, or work in a corporate office, the **Logitech™ PageScan™ Color** full page scanner is powerful and easy-to-use, offering personal document management, color, and flatbed versatility. For FaxBack information call: **1-800-245-0000**, Document 4046. Or phone **1-800-889-0040** for more information. Visit Logitech and PageScan Color @ http://www.logitech.com

One-click operation to scan, type, file, copy, or fax.

Scan sheets or bound materials in no time!

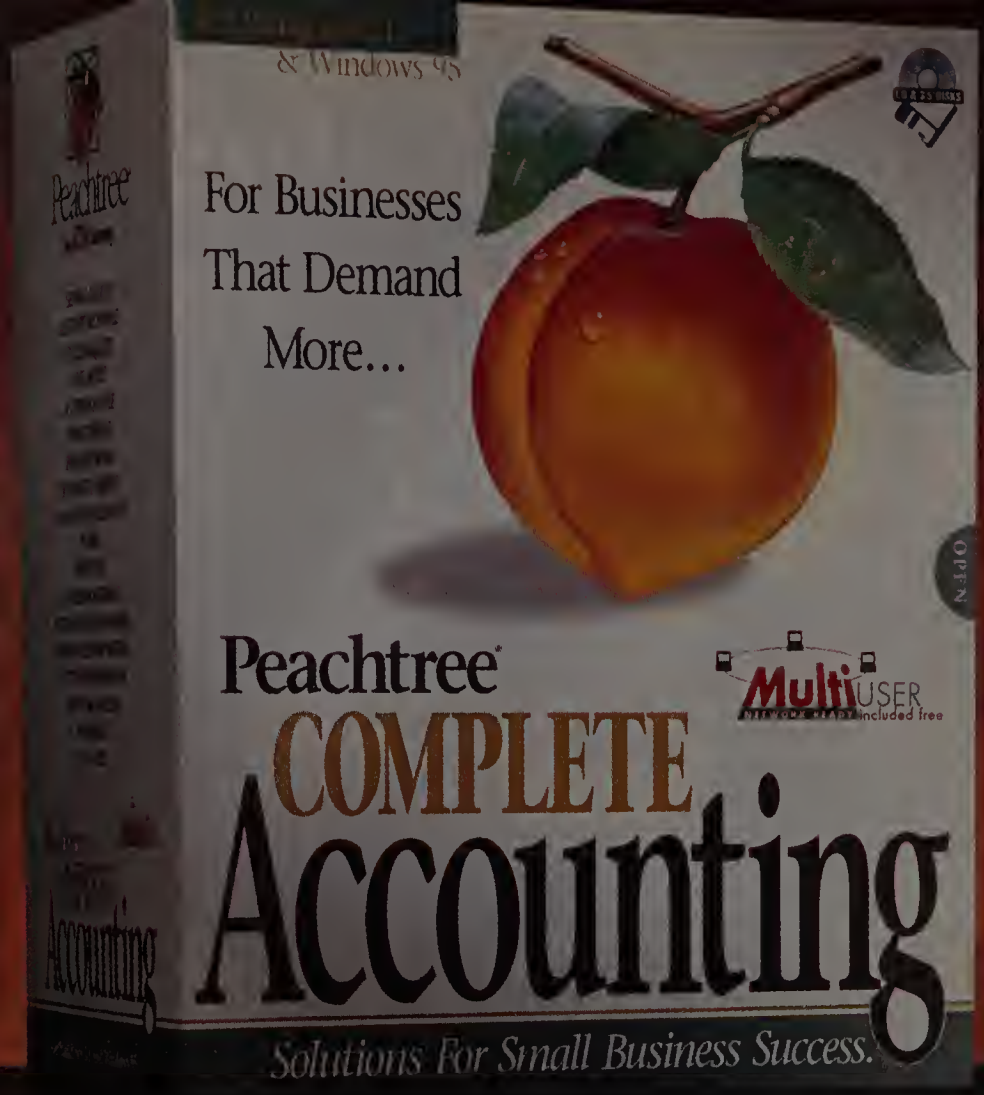
Flatbed capability in a compact size that fits neatly next to your PC.



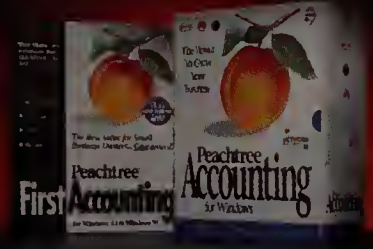
The only color sheet-fed scanner to plug into any PC parallel port — no need to open your PC.

LOGITECH
Products people love™

Logitech the Logitech logo PageScan Color and Products People Love™ are trademarks of Logitech.
All other trademarks are the property of their respective owners. Requires a PC with DOS 3.3 or Windows 3.1 or higher



Peachtree Complete. The Big Solution For Small Business.



Introducing the newest and biggest solution for small business yet — Peachtree Complete Accounting for Windows. Whether your business has one person or fifty, Peachtree Complete is so comprehensive, it's sure to answer all your accounting needs. . .and more! Complete is packed full of powerful features to help you manage your business, such as General Ledger, Sales and Receivables, Accounts Payable, Inventory, and Payroll. And we've integrated features that make Complete truly unique. Features like Sales Orders to help you with backordering and partial shipments, and Job Costing which allows you to compare estimated job costs to actual costs. There's even a new Fixed Assets module to make your life easier by helping you with those depreciation and tax issues. With this latest addition, it's easier than ever to choose the Peachtree product that is right for you. From the incredible value of First Accounting, to the business building features of Peachtree Accounting, to the comprehensive solutions of Peachtree Complete, you'll find that Peachtree is perfect for helping you solve your not-so-small, small business problems.

Circle 223 on reader service card

Peachtree
An ADP Company

Office DEPOT · OfficeMax · EGGHEAD · ELEK-TEK · STAPLES · MICRO CENTER · BEST BUY · COMPUSA

Solutions for Small Business Success

Call 1-800-428-9989 or visit us online at http://www.peach.com for the right Peachtree solution.

STREET PRICE...

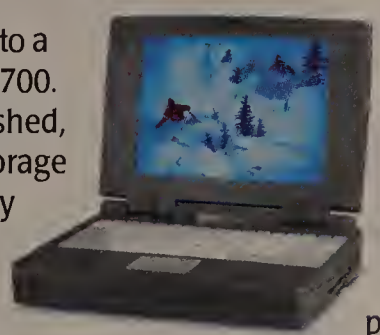
$3895

POWERCD 8700, P150, 11.8" ACTIVE MATRIX DISPLAY, 16MB EDO RAM 800 HDD

150 MHz

PC WORLD TOP 20 NOTEBOOK PCs

Think of it as a supercomputer with a touchpad.



Move over Hal. Because AMS has given birth to a new, portable giant. We named it the PowerCD 8700. With a Pentium® Processor waiting to be unleashed, up to 40MB of RAM ready to perform, and storage space up to 2.1 Gigs, the PowerCD 8700 is truly one supercomputer.

As one of the most complete, powerful, feature-rich, multimedia notebooks available today, this small but mighty powerhouse is fully optimized for 100 to 150 MHz Pentium® Processors and will blow the lid off other notebooks. There's a 256KB external level II secondary cache that gives you a command performance every time. Plus, an internal PowerCard port for networking, ISDN communications and impressing your friends. With the PowerCD's ability to display direct to TV, or effortlessly handle full-screen MPEG video and CD-quality sound, you can give a presentation that's worthy of a sequel.

There you have it. Power. Performance. Features. Available now from AMS. And nobody can touch it. For more information, call 800-980-8889.

- PCI Plug-N-Play System Supports 75 to 150 MHz Pentium® Processor-based CPUs
- Internal 6X CD-ROM with full Digital Audio/Video Support
- 2MB VRAM and 256 Level II Cache for Outstanding Performance
- Supports up to 40MB of RAM and over 2 Gigs of Hard Disk Storage
- Built-in PCCARD Type III Slot, Wireless Infrared and NTSC Direct TV Ports
- Support for Internal Fax/Modem, MPEG Module and AMS PowerCards
- Optional PowerCard Modules Include Ethernet, SCSI, ISDN and More
- Full 3 Year Parts and Labor Warranty with Lifetime Toll Free Technical Support

Circle 27 on reader service card

LIFETIME TECH SUPPORT
800-886-3536
818-813-2391

intel inside pentium PROCESSOR

AMS Tech
Power To Go.
800-980-8889
Contact us via Compuserve: GO AMSONLINE
See us on the web: http://www.amsnote.com
TEL: (818) 814-8851 • FAX: (818) 814-0782

THREE YEAR WARRANTY 3
Parts & Labor Warranty

24 HOUR BBS
818-813-2383
818-813-2384

Intel, the Intel Inside logo and Pentium are registered trademarks of Intel Corporation. All other trademarks and registered trademarks are the property of their respective companies. Not responsible for errors in advertising. Prices and specifications are subject to change without notice.

A BETTER 3 YEAR SERVICE
YOU HAVE OUR WORD

NEXT-BUSINESS-DAY AT-YOUR-DESK SERVICE GUARANTEE*

If your Dell system experiences a covered hardware failure while it is under a next-business-day, on-site service contract purchased from Dell, and if Dell has dispatched a service call before 5:00 PM local customer time, Monday through Friday, a technician, if needed, will arrive at your location to address your problem by the end of the next business day. In the rare event that the technician does not arrive as promised, let Dell know. Your situation will receive top priority for resolution, plus you will receive an additional month of service for free.

GUARANTEED

PROGRAM? ON IT.

DELL DIMENSION™ XPS Pro200n
200MHz PENTIUM® PRO PROCESSOR

- Mini Tower Model
- 16MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS® Office Professional with Bookshelf for Windows® 95
- Microsoft® Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty†

★ *Upgrade to 32MB of EDO memory, add $299.*

★ *Upgrade to 3 Years of On-site Service, add $99.*

★ *Upgrade to the NEW Imagine 128 Series 2 with 4MB VRAM, add $329.*

$2799
Business Lease◊: $104/Mo.
Order Code #500273

***NEW* DELL DIMENSION XPS P200s**
200MHz PENTIUM PROCESSOR

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

★ *Upgrade to 32MB SDRAM memory, add $299*

PICTURED SYSTEM

$2499
Business Lease: $92/Mo.
Order Code #500271

DELL DIMENSION P133t
133MHz PENTIUM PROCESSOR

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15LS Monitor (13.7" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty

★ *3Com® EtherLink® Interface Combo Card, add $99.*

★ *28.8 Data/Fax Modem, add $129.*

★ *ACS-31 Speakers and AWE32 Sound Card, add $219.*

$1799
Business Lease: $67/Mo.
Order Code #500268

DELL DIMENSION P100t
100MHz PENTIUM PROCESSOR

- Mini Tower Model
- 8MB EDO Memory
- 256KB Pipeline Burst Cache
- 850MB Hard Drive [12ms]
- 14XE Monitor (13.19" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty

★ *Upgrade to 16MB of EDO memory, add $99.*

★ *Upgrade to a 1.6GB hard drive, add $90.*

★ *ACS-5 Speakers and Sound Blaster 16 Sound Card, add $99.*

$1449
Business Lease: $54/Mo.
Order Code #500267

If you are looking for a better service program, we have one word for you: guaranteed. At Dell, we guarantee that if there's a problem with your Dell Dimension, a Dell-certified technician will be at your desk the next business day, servicing your PC. And in the rarest of events that we're not there the next day, you get an extra month of service at no charge.

It's all part of our new and improved standard service program that covers your Dell Dimension PC for 3 full years. Including one year of Guaranteed Next-Business-Day, On-Site Service∆ the first year, and then two additional years of Next-Business-Day Parts Delivery.

3 YEAR WARRANTY

So call today and get covered by the Dell Service program.

DELL®

TO ORDER

800-433-8113
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada,* call 800-232-6978

Keycode #03146

Dell's featured computer artist is Nance Paternoster of San Francisco, CA.

*Guarantees available in the U.S. only for registered owners of Dell Dimension systems purchased after 8/1/93. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite D, Austin, TX 78758. ∆On-site service provided by BancTec Service Corp. On-site service may not be available in certain remote locations. ◊Business leasing arranged by Leasing Group, Inc. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo are registered trademarks of Microsoft Corporation. 3Com and EtherLink are registered trademarks of 3Com Corporation. ©1996 Dell Computer Corporation. All rights reserved.

intel inside pentium PROCESSOR

Designed for Microsoft® Windows®95

HELP LINE Q & A

Boot to Windows 3.1 or Windows 95

Q I recently installed Windows 95 over Windows 3.1. I want to keep Windows 95, but I need to use Windows 3.1 occasionally in order to run Adobe Photoshop 3.0 and Illustrator 4.0—it's not yet worth it for me to upgrade to the Windows 95 versions of those applications. Is there a way to install Windows 3.1 without uninstalling Windows 95, and select the earlier version when I boot up?
Allen Katz, Brooklyn

A Windows 3.1, 3.11, or any version of Windows for Workgroups runs just fine on top of Windows 95's real-mode operating system core, so you don't need to reinstall your old version of DOS or uninstall Windows 95. But you *will* need to do three things to run both Windows 3.1 and Windows 95:

1. Make Windows 95 stop loading by default at boot-up.
2. Edit config.sys and autoexec.bat so that they let you choose between Windows 3.1 and Windows 95 at boot-up.
3. Reinstall Windows 3.1 to a new directory.

For the first step, select *Start•Run*, type **attrib -s -h -r c:\msdos.sys** in the Open field, click *OK*, then open the file in your favorite text editor. In the '[Options]' section, change the line BootGUI=1 to **BootGUI=0**, save and close the file, and reset its system, hidden, and read-only attributes with the command **attrib +s +h +r c:\msdos.sys**. The next time you start or restart your system, Windows will boot to the command prompt. To start Windows 95, type **win**, just like in the good old days.

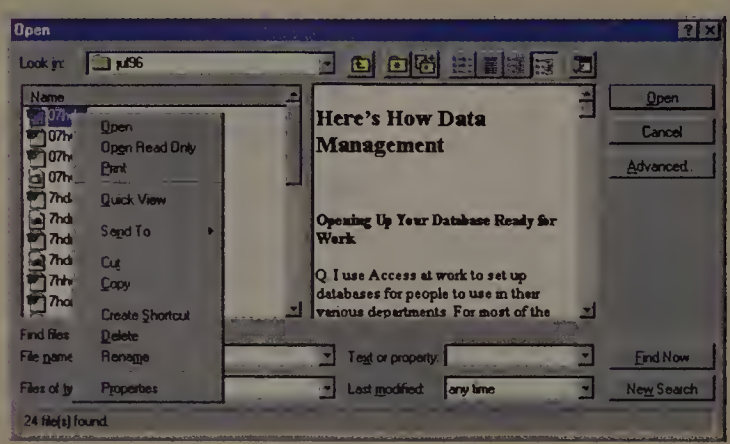
The second step is to add menus to your config.sys and autoexec.bat files that let you choose between two configurations. **FIGURES 1** and **2** show the config.sys and autoexec.bat multiconfiguration files from one of my systems.

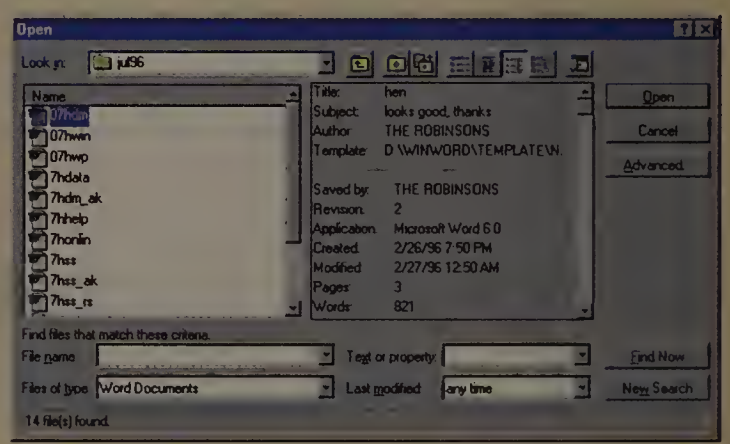
The Windows 95 configuration may be quite minimal; strictly speaking, config.sys and autoexec.bat aren't even required. Your Windows 3.1 configuration should load any real-mode drivers and TSRs required to support your CD-ROM drive, mouse, or other hardware, plus memory managers, disk caching, and environment variables.

Important: The Windows 3.1 path in your autoexec.bat must point to the Windows 3.1 directory rather than to the Windows 95 directory. Unfortunately, Windows 95 puts the Windows 95 directory at the beginning of your path, no matter what autoexec.bat's

Manipulate Files Without Leaving Your Windows 95 Applications

The File Open dialog box acts as a mini-Explorer window for many Windows 95 applications; you can delete, copy, and otherwise manipulate files by simply right-clicking them. Click the Preview icon to display a highlighted file's contents in the right pane (see below left) if you want to know what's in the file before you do anything with it. Select the Properties icon to call up detailed information about the file itself (see below right).





DOUG ROSS

```
CONFIG.SYS
[menu]
menuitem=Win95, Start Windows 95
menuitem=Win31, Start Windows 3.1
menudefault=Win31, 15
[common]
device=c:\windows\himem.sys
device=c:\windows\emm386.exe noems
dos=high,umb
[Win95]
[Win31]
device=c:\aspi4dos.sys
device=c:\aspicd.sys /d:aspicd0
[common]
```

FIGURE 1: CHOOSE WINDOWS 95 OR WINDOWS 3.1 when you boot up by adding a menu to your config.sys file.

```
AUTOEXEC.BAT
@echo off
echo Configuration is %config%
;path=c:\windows;c:\windows\command
goto %config%
:Win95
win
goto end
:Win31
lh c:\windows\smartdrv.exe 2048 128
lh c:\windows\command\mscdex.exe /d:aspicd0 /l:h
lh c:\mouse.com
path=c:\win31;c:\windows\command
win
:end
```

FIGURE 2: BYPASS WINDOWS 95'S OVERRIDE BEHAVIOR by adding two path statements to your autoexec.bat file.

path= statement says. The trick is to have two path statements—one that triggers Windows 95's annoying override behavior, and one that points to the Windows 3.1 directory. The strange part of this trick is that you must disable the first path statement by preceding it with a semicolon; the rem statement won't do the job. If you don't need a path for your Windows 95 configuration, place the statement **;path=** (with no directories) on the line before your Windows 3.1 path statement.

The [common] label at the end of config.sys allows other programs to add statements that both configurations will see. You may not want new statements to be shared by both versions, however. For example, Windows for Workgroups 3.11 will add the 32-bit file access driver ifshlp.sys and prevent Windows 95 from booting. In this example, deleting [common] will make new config.sys statements a part of the win31 block only.

Once you're satisfied that your multiple-configuration boot files are loading properly, boot to your Windows 3.1 configuration and install Windows 3.1 to the directory in autoexec.bat's 'set path=' statement (I chose win31). It won't hurt to dig up installation disks for all your peripherals, and even a copy of your old Windows 3.1 config.sys and autoexec.bat files.

Near the end of installation, the setup utility in Windows 3.1 may inform you that it couldn't modify config.sys and autoexec.bat files because of the multiple configurations. When setup is complete, go to the Windows 3.1 directory and peruse the contents of config.win and autoexec.win. If nothing Windows has added (in uppercase) looks

Here's How To ...

Access hidden files in Windows 95 254
Add a drop-down list in Excel 244
Boost your printer's speed 240
Create a garbage bin for floppy files 258
Create icons for your documents 256
Delete screen savers 258
Edit a long document in two windows in Word and Word Pro 250
Experience virtual reality on the Web 264
Find hidden files in Windows 95 254
Format readme files in Windows Write 254
Get a copy of QuickView 240
Get the best PC value 268
Indent lines within a paragraph in Word 250
Keep first page unnumbered in Word 248
Learn about ISDN 264
Make creation date stick in WordPerfect 250
Open tables and forms automatically in Access, Approach, and Paradox 262
Put shortcuts in your Taskbar tray 254
Record increases in values in 1-2-3 246
Remove Disk Manager in Windows 95 270
Restore the Windows 95 font viewer 260
Run both Windows 3.x and Windows 95 238
Search every word in Windows Help 240
Specify page break settings in Word 248
Speed Word Pro 250
Speed your Internet connections 264
Surf with Navigator in America Online 264
Take advantage of File Open dialog box 238
Take "snapshots" of Excel graphs 246
Turn off macro alarms in Excel 246
Uninstall a DSI modem driver 256
Unstick a stuck hard disk 270
Upload files to your Web page 266
Use Word templates 248

like a recipe for boot disaster, make backups of your current config.sys and autoexec.bat, then copy the new files to your root directory with the commands **copy config.win c:\config.sys** and **copy autoexec.win c:\autoexec.bat**.

When you reboot, Windows 95 presents a menu of the two Windows versions. Select one, and it starts up.

Speed Printing by Using ECP

Q My new PC has an Extended Capability Port. Do I need a special type of parallel cable to use the ECP with my Okidata OL400e printer?
Andrew Gamble, Richmond, Kentucky

A You do need an ECP-compatible printer cable to take advantage of your PC's high-speed bidirectional transmission capabilities. ECP's data compression can make printing, especially of graphics, 50 to 100 times faster than with a standard parallel connection. Unfortunately, your printer's parallel port must also support ECP to see this benefit. Older models, including the OL400e, offer only standard Centronic parallel and RS-232C serial connectors. Though you won't get any speed benefits, your computer's ECP port is completely compatible with your old printer and cable.

Where's QuickView?

Q I keep reading about a file viewer called QuickView that's supposedly built into Windows 95, but it's not on my PC, and it's not an installation option. I bought the floppy disk version of Win 95, which doesn't include all the utilities on the CD-ROM version. Is QuickView one of the tools that were left out? If so, how can I obtain it?
Robert Wilson, Downers Grove, Illinois

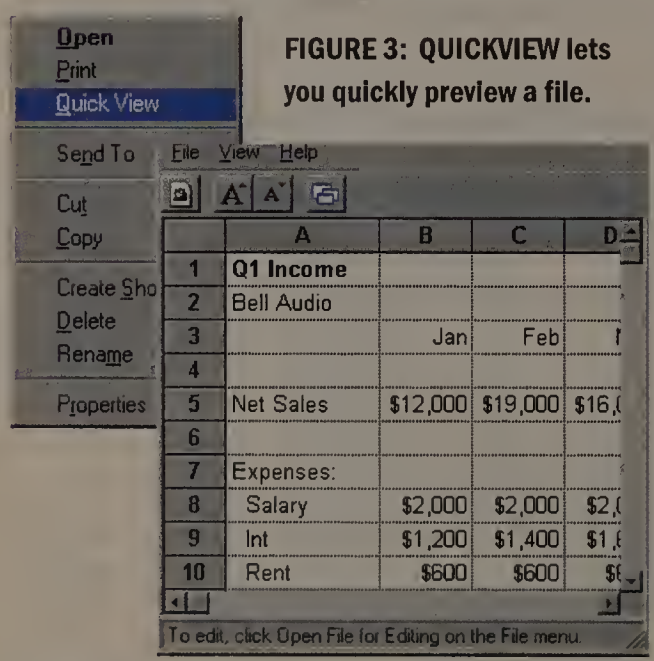


FIGURE 3: QUICKVIEW lets you quickly preview a file.

A Yes, Microsoft did leave QuickView out of the floppy version of Windows 95, but you can download a copy (quikvu.exe) from Microsoft's FTP site (ftp.microsoft.com\softlib\mslfiles\). Microsoft's Windows CD-ROM Extras Web page (http:// www.microsoft.com/windows/software/cdextras.htm) contains more utilities not included on the floppy version—except for QuickView.

For $9.95, you can get all the CD-ROM extras on floppies, including the dial-up networking scripter, policy editor (for controlling each user's desktop settings), system monitor, CD player, and multiple language support tools—just use the coupon in the manual (*Introducing Microsoft Windows 95*).

QuickView (see **FIGURE 3**) can be addictive. If you become a QuickView junkie, you may want to upgrade to QuickView Plus, an expanded product sold by the makers of QuickView (which Microsoft licensed). QuickView Plus reads about 200 file types, compared with the regular QuickView's 30 or so file types.

- **QuickView Plus** $50; Inso Corp.; 800/333-1395
  Reader service no. 691

Search Windows Help Files

Q I'm looking for a utility that will let me search Windows help files for a particular word. The .hlp files have a keyword index, true, but that's only useful if the file's author did a good job of assigning keywords to the topics. Since I'm seldom on the same wavelength as the author, finding the help I need is often a shot in the dark. Do you have any advice?
Gary Shweid, Millbrae, California

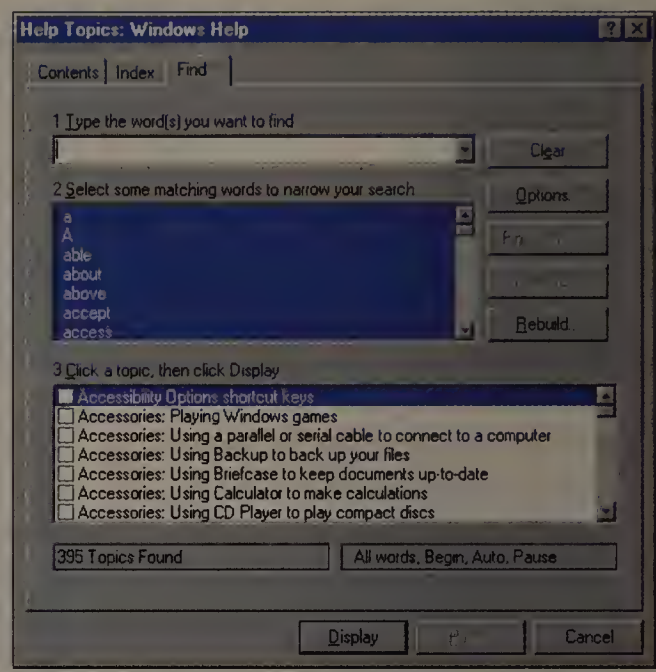


FIGURE 4: INDEX EVERY WORD IN THE WINDOWS 95 HELP FILES to search for what you need, instead of second-guessing how a help file is categorized.

A In Windows 95, you can get an index of *all* words in the help file (or files). First select *Start•Help*, then click the *Find* tab and the *Rebuild* button. Finally, select *Maximize search capabilities*. When the indexer is finished, you can search for any word in the help file or files (see **FIGURE 4**).

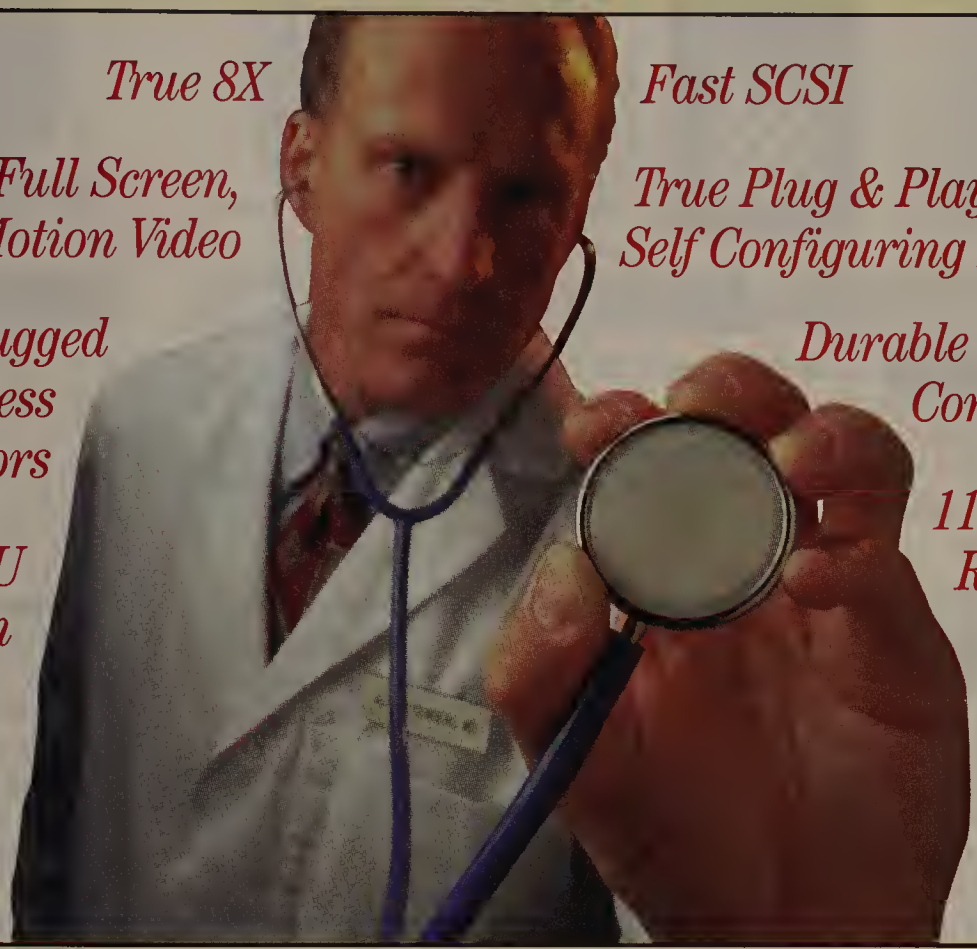
The trick doesn't work for Windows 3.1–style help files, though, because they lack the full-text indexing feature. If you're determined to scour Windows 3.1 help files, try the pricey but powerful program Help Browser 2.0 from Cascadilla Press. You can download a demo version from the company's Web page (http://www.cascadilla.com).

- **Help Browser 2.0** $89; Cascadilla Press; 617/776-2370
  Reader service no. 692

By Scott Spanbauer

Scott Spanbauer is a contributing editor for PC World *and author of* The No B.S. Guide to Windows 95 *(No Starch Press, 1996, 800/420-7240). Help Line welcomes your questions and tips and pays $50 for published items. See page 14 for contact information.*

If Our 8PleX Specs Don't Impress You, Check Your Pulse.



True 8X

Fast SCSI

Full Screen, Full Motion Video

True Plug & Play Self Configuring SCSI ID

Rugged Brushless Motors

Durable Metal Construction

115ms Random Access Time

Low CPU Utilization

Plextor Manager Utilities

Toll Free Technical Support

The True 8 Speed Professional CD-ROM Drive. Heart-Pumping Performance for Data Searches and Multimedia.

If information is the life-blood of your organization, this drive will be the heart of it. Because the new 8PleX has performance that beats any CD-ROM drive, and quality that will make your heart skip a beat.

To meet the demands of high-volume data searches, intense multimedia, and full-screen video, the 8PleX boasts the world's fastest random access time of 115ms and spins out transfer rates of 1200KB/sec. No other drive is faster. Set-up is faster, too, because the 8PleX offers full plug-and-play compatibility with Windows® 95, and automatic SCSI ID selection.* It also works with all other major operating systems.

The 8PleX comes with our powerful Plextor Manager software that works with any CD format, optimizes digital video, and lets you capture audio to disc. But what makes the 8PleX the ideal drive for mission-critical network applications is our reliability. Every one is built with quality metal construction and our own brushless motors inside.

With so much heart-pumping performance, productivity features and high-quality construction in one package, 8PleX is more than just a drive. It's everything your heart desires.

Look for us at major distributors, your nearest dealer, or for more information call 1-888-675-3986.

PLEXTOR

yes It runs with NetWare

©1996, Plextor Corp. All Rights Reserved. All trademarks or registered trademarks specified are owned by their respective holders.

*Automatic SCSI ID selection requires SCAM capable SCSI controller, available in specially priced 8PleX kits.

Circle 175 on reader service card

The Pioneer In Build-To-Orde

NEW!

200MHz PowerHouse with Microsoft® Windows® NT!

Quality PCs and Relationships

We build competitively priced, high-quality personal computers and long-lasting relationships with our customers. Because we listen to you first, we can build a customized PC to exceed your expectations. Our goal is nothing less than your complete satisfaction.

SWAN TECHNOLOGIES corporation

World-Class Quality

At Swan, we never cut corners on product quality. We believe it's "quality in, quality out"–a quality you'll appreciate even if you never see the inside of your computer.

Windows NT or '95 You Choose!

Swan gives you the option to choose between Microsoft® Windows® 95 or Windows® NT for our Office and PowerHouse systems.

Microsoft® Windows® 95

Custom-Configuration For You

Swan will gladly custom-build a system to order. And when we say "custom-build", we mean it. Many companies can make minor adjustments to a pre-configured system and call it "customized." Swan will build a PC from the ground up just for you to meet your exact requirements and our demanding quality standards.

customize your PC

Swan Business Leasing

Swan business leasing is quick and smart! Leasing your PC from Swan has never been easier. Swan offers affordable payment plans that are designed to meet your business' monthly budget. Leasing options are available to all qualified business customers through the nation's top leasing organizations, including AT&T Capital Leasing Services and Trans Leasing International. Swan's business leasing offers the lowest possible monthly rates, lease-to-own options and terms of 12-60 months. A Swan Sales Consultant can provide details on the benefits and terms of each option.

LEASE a month

Swan Express Next-Day Delivery

When you need your new computer immediately, look for the Swan Express icon. These systems are available for immediate delivery. Just call us by 1pm EST and your system will be shipped the same day.

Life-Time Toll-Free Support

When you have a question, Swan is there. We offer lifetime toll-free support to all our customers. We're always focused on ensuring that our customers get the information–and tools–they need to stay productive.

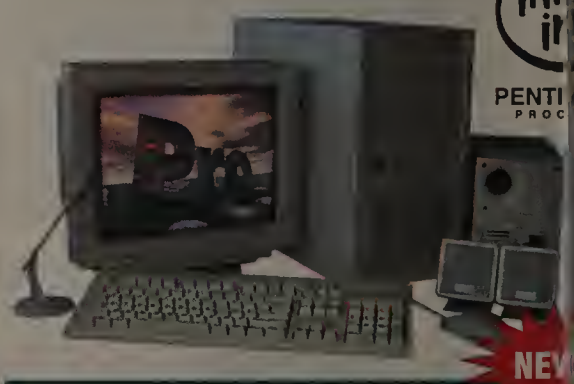
express

Satisfaction Guaranteed

We offer a no-hassles 30-day money-back guarantee. Plus, there's our one-year free on-site support including parts and labor for our desktop systems.

FREE Swan Product Catalog

Swan offers a full line of PC products, notebooks, servers and peripherals. Please call us today (toll-free) at 800-261-7926 to receive our FREE Full Line catalog.



NEW

Office Pro-Deluxe 200MHz

For your demanding CPU intensive applications, this is the system you've been waiting for–at the right price! This workstation has the dependable performance of Windows® NT with the powerful, advanced Intel® Pentium® Pro processor and 200MHz of amazing speed.

- **200MHz Intel® Pentium Pro® Processor**
- **32MB EDO Memory, Expand to 128MB**
- **256K Pipelined Burst Cache**
- **2.5GB EIDE Mode 4 Bus Mastering Hard Drive**
- **64-bit PCI Graphics Accelerator with 2MB EDO Memory and Software MPEG**
- **8X EIDE CD-ROM Drive**
- **Intel® 440FX Chipset**
- **17″ .28 Pitch Monitor**
- 1Mbit Flash PnP BIOS, For Easy Upgrades
- Type 8 ZIF Socket Upgradability
- PCI Rev 2.1 Local Bus with Concurrent Burst Mode
- 104 Key Windows® 95 Keyboard and Mouse
- 2 High-Speed Serial Ports, 1 Parallel Port
- 3.5″ Floppy Drive
- **Microsoft® Windows® NT**
- **Microsoft® Office Professional**
- **Netscape® Internet Access Software**
- 6 Bay Mini-Tower ATX Case
- 7 Expansion Slots: 3 PCI, 3 ISA, 1 PCI/ISA
- **One Year On-site Factory Parts and Labor Warranty**

$4099 express

price does not include multimedia package

LEASE $143 a month

Multimedia Package with Cambridge SoundWorks™ Speakers and Sub-woofer **CALL**

GOVERNMENT COMPUTER NEWS

SERVICE • RELIABILITY • READERS' CHOICE • PC MAGAZINE

PCComputing BEST

World Wide Web http://www.swantech.com

Personal Computing Products

NEW!

SwanNote-Plus/CD Multimedia Notebook with 6X Internal CD-ROM!

intel inside pentium® PROCESSOR

NEW!

intel inside pentium® PROCESSOR

Internal CD-ROM Module

PowerHouse-Deluxe 200MHz

Our most popular desktop now features Intel's fastest Pentium® processor–200MHz! With the enormous 2.5GB hard drive there's lots of room for growth too. Swan has carefully selected and approved all components to optimize performance and reliability.

- **200MHz Intel® Pentium® Processor**
- **16MB EDO Memory, Expand to 128MB**
- **512K Pipelined Burst Cache**
- **2.5GB EIDE Mode 4 Hard Drive**
- **64-bit PCI Graphics Accelerator with 2MB EDO Memory and Software MPEG**
- **Intel® 430FX Chipset**
- **8X EIDE CD-ROM Drive**
- **28.8 Kbps Internal Fax/Modem**
- **Creative Labs Vibre 16™ 16-bit Stereo SoundBlaster™ Compatible Sound Card**
- **Altec Lansing Stereo Speakers**
- 15″ .28 Pitch Monitor
- 1Mbit Flash PnP BIOS, For Easy Upgrades
- Type 7 ZIF Socket Upgradability
- PCI Local Bus with Enhanced IDE
- 104 Key Windows® 95 Keyboard and Mouse
- 2 High-Speed Serial Ports, 1 Parallel Port
- 3.5″ Floppy Drive
- **Microsoft® Windows® 95 or Microsoft® Windows® NT**
- **Microsoft® Office Professional**
- **Encarta™, 8 Popular CD-ROM Titles**
- **Netscape® Internet Access Software**
- 9 Bay Mid-Tower Case
- 6 Expansion Slots: 3 PCI, 2 ISA, 1 PCI/ISA
- **One Year On-site Factory Parts and Labor Warranty**

$2999 LEASE $110 a month

PowerHouse-Deluxe 166MHz $2699

PowerHouse-Deluxe 100MHz

This incredible value is designed to exceed all your business performance application demands. With plenty of opportunity to expand, the PowerHouse has the features for all your custom computing needs.

- **100MHz Intel® Pentium® Processor**
- **16MB EDO Memory, Expand to 128MB**
- **256K Pipelined Burst Cache**
- **1.2GB EIDE Mode 4 Hard Drive**
- **64-bit PCI Graphics Accelerator with 1MB EDO Memory and Software MPEG**
- **Intel® 430FX Chipset**
- **6X EIDE CD-ROM Drive**
- **28.8 Kbps Internal Fax/Modem**
- **Creative Labs Vibre 16™ 16-bit Stereo SoundBlaster™ Compatible Sound Card**
- **Altec Lansing Stereo Speakers**
- 15″ .28 Pitch Monitor
- 1Mbit Flash PnP BIOS, For Easy Upgrades
- Type 7 ZIF Socket Upgradability
- PCI Local Bus with Enhanced IDE
- 104 Key Windows® 95 Keyboard and Mouse
- 2 High-Speed Serial Ports, 1 Parallel Port
- 3.5″ Floppy Drive
- **Microsoft® Windows® 95 or Microsoft® Windows® NT**
- **Microsoft® Office Professional**
- **Encarta™, 8 Popular CD-ROM Titles**
- **Netscape® Internet Access Software**
- 9 Bay Mid-Tower Case
- 6 Expansion Slots: 3 PCI, 2 ISA, 1 PCI/ISA
- **One Year On-site Factory Parts and Labor Warranty**

$1899 express LEASE $70 a month

PowerHouse-Deluxe 133MHz $2149

SwanNote-Plus/CD P133

Experience the ultimate in multimedia notebooks. Ergonomically designed with the latest technology–all in one sleek, compact package.

- **133MHz Intel® Pentium® Processor**
- **12.1″ Active-Matrix 800x600 Color Display**
- **8MB DRAM, Expand to 40MB**
- **810MB EIDE Hard Drive, Expand to 1GB**
- **6X EIDE CD-ROM Internal Module**
- **16-bit Stereo Audio, SoundBlaster™ Compatible**
- **Built-in Microphone and Stereo Speakers**
- **Lithium Ion Battery with Universal AC Adapter**
- **3.5″ Modular Floppy Disk Drive**
- **Infrared IrDA Port**
- 256K Synchronous Pipelined Burst Cache
- **Intel® 430MX Mobile Chipset**
- 6.8 lbs. (with CD-ROM Drive)
- 32-bit PCI Local Video Bus, 1MB DRAM
- 11.1″ W x 8.66″ D x 1.89″ H
- TrackPad Ergonomic Pointing Device
- Flash BIOS
- 9 Icon LCD System Status Panel
- 2 Type II /1 Type III PCMCIA Slots
- 87-Key Keyboard
- **Microsoft® Windows® 95**
- Carrying Case
- **One Year Factory Parts and Labor Warranty**

$3599 LEASE $126 a month

SwanNote-Plus/CD 100MHz $3299

SWAN 15 YEARS

800-554-6746 96PCW7

Federal Customers Call: 800-382-4919 • **GSA# GS-35-4270D** • www.swantech.com

Specifications and prices subject to change without notice. All marks are property of their respective organizations. *Overnight delivery available on Swan Express orders. On-site service may not be available in some remote locations. Call for details of warranty and service agreements. †Upgrade prices valid at time of system purchase. (Ad by MoonBeam Graphixs, Marlborough, MA)

SWAN TECHNOLOGIES corporation

Circle 214 on reader service card

SPREADSHEETS Q&A

Add a Drop-Down List to an Excel Form

Q I've set up a mileage sheet that employees in my division use for travel arrangements. Users fill in their name and address, enter the travel mileage in a table, print it, and submit it for approval. I've heard Excel will let me create a drop-down list to fill in the name and address automatically, but I don't know how to set it up. Can you help?
Carroll West, Cayce, South Carolina

A I use this kind of arrangement all the time. The solution I've cooked up, illustrated in **FIGURE 1**, is based on three elements: a database of names and addresses, a data entry form with a drop-down list of the names in the database, and a set of formulas that copy a person's address and social security number from the database to the data-entry form.

Here's how to set the model up.

1. In a new worksheet, enter the data shown at the top of Figure 1.

2. Place the pointer in cell G1, and select *Insert•Name•Define* to assign the name **e_empindex** to cell G1.

3. Select *Insert•Name•Define* again, enter **e_data** in the Names in Workbook box, and in the 'Refers to' box, enter the formula **=offset(Sheet1!A1,1,0,counta(Sheet1!$A:$A)-1,4)** to create a dynamic range. This range, which begins on cell A2, is four columns wide and as many rows high as there are entries in column A of the sheet, minus one row.

4. Click the *Sheet 2* tab, and enter the labels shown in cells A1 and A3 and A8:C8 of the figure. Enter the formula **=index(e_data,e_empindex,1)** in cell B3; **=t(index(e_data,e_empindex,2))** in cell B4; **=t(index(e_data,e_empindex,3))** in cell B5; **="SSN: "&index(e_data,e_empindex,4)** in cell B6. These formulas find the record in the database that corresponds to the value in E_EmpIndex. The t() functions in B4 and B5 convert the value of the formula to text, eliminating a zero value if the database value is missing.

5. To create the drop-down box, select *View•Toolbars*, and select the *Forms* toolbar. Click the drop-down tool and draw the box on sheet 2 as shown. To link the box to the database and the index cell, right-click it and select *Format Object*. Click the *Control* tab and enter **e_data** as the Input Range, and **e_empindex** as the Cell Link. Click the *Properties* tab and deselect *Print Object*, then click *OK*.

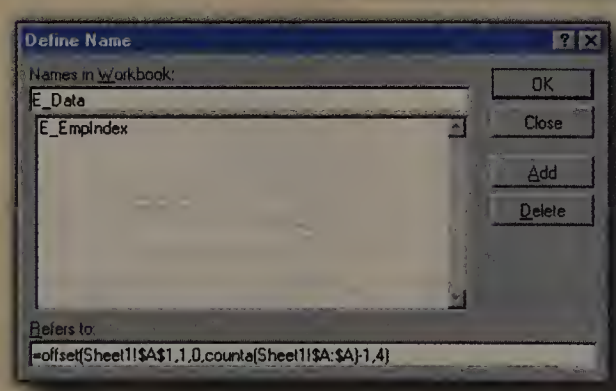
6. Click outside of the drop-down box to deselect it, then test it by clicking the Down arrow and selecting a name. The appropriate name and address will show up on the form.

Add a Drop-Down Box to a Data Entry Form in Excel

❶ In sheet 1, enter the data in ranges A1:D4 and F1:G1.

	A	B	C	D	E	F	G
1	Name	Address	City/State/Zip	SS#		E_EmpIndex	3
2	Pat Sanchez	123 East St	Cayce, SC 21345	123-45-6789			
3	Terry Johnson	234 West St.	Charleston, SC 21222	234-56-7890			
4	Karol Jastrzebski	234 South St.	Columbia, SC 21333	345-67-8901			

❷ Assign the label in cell F1 as the name for cell G1.

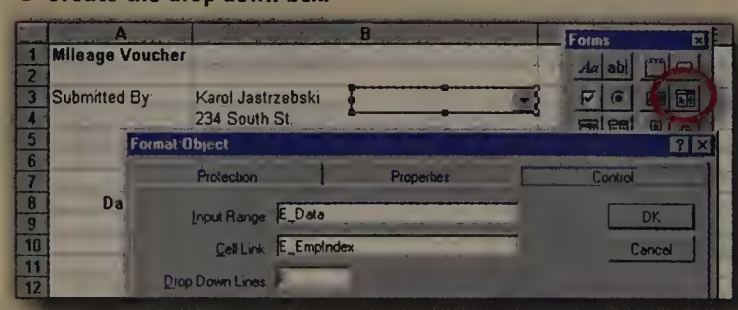


❸ Create a dynamic database range.

❹ In sheet 2, enter the labels in cells A1 and A3 and range A8:C8 and the formulas in range B3:B6.

	A	B	C
1	Mileage Voucher		
2			
3	Submitted By:	=INDEX(E_Data,E_EmpIndex,1)	
4		=T(INDEX(E_Data,E_EmpIndex,2))	
5		=T(INDEX(E_Data,E_EmpIndex,3))	
6		="SSN: "&INDEX(E_Data,E_EmpIndex,4)	
7			
8	Date	Miles	Gas

❺ Create the drop-down box.



❻ Select a name from the drop-down box, and Excel automatically fills in the form.

	A	B	C
1	Mileage Voucher		
2			
3	Submitted By:	Karol Jastrzebski	
4		234 South St.	
5		Columbia, SC 21333	
6		SSN: 345-67-8901	
7			
8	Date	Miles	Gas

Karol Jastrzebski
Pat Sanchez
Terry Johnson
Karol Jastrzebski

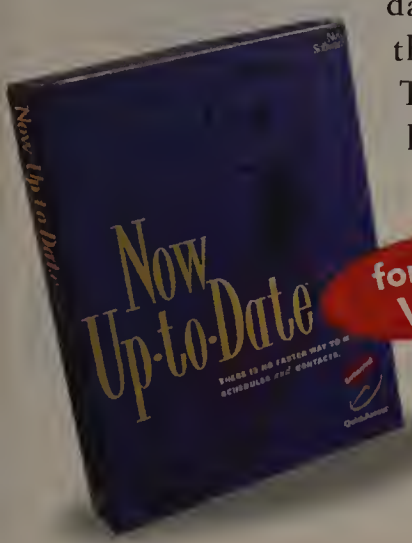
FIGURE 1: THE INDEX FORMULAS ENTERED IN STEP 4 LET YOU USE A DROP-DOWN LIST to pull information from a database.

Now Software
It's about time.

What kind of person can get Hootie & The Blowfish, Tori Amos, *and* Collective Soul on his calendar?

You. And no recording industry experience required. Announcing Now Up-to-Date,™ the only schedule and contact manager that brings you the world of the Web.

Take off to sites like Atlantic Records. With a single drag and drop, you can add your favorite artist's concert dates, even a whole group of them, to your calendar. Find Tori Amos' tour date for your home town and simply drag it into your calendar, along with a hot link back to the Atlantic site. No typing. No extra steps.



Need someone's e-mail address? Surf over to the Four11 site, where you can add it into your Now Up-to-Date address book in a single drag and drop operation.

Got an intranet at work? Now Up-to-Date Web Publisher lets you post calendars and address listings with absolutely no HTML programming. Everyone has easy access to employee directories, client lists and project schedules through their Web browser—Windows 95, 3.1 and Mac OS alike.

To download a free trial of Now Up-to-Date, visit the Now Software Time Management Network at http://www.nowsoft.com/trial4. You'll find everything you need to get started, including links to the growing list of Web sites already publishing calendars and address books.

To find out how Now Up-to-Date can get you connected, call 1-800-730-7855.

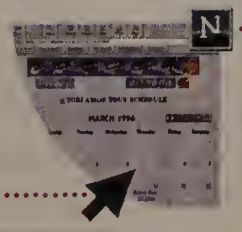
Sunglasses optional.

Mac OS

Designed for Microsoft Windows 95

1 *Visit www.atlantic-records.com*

2 *Now drag-and-drop*



3 *any event into your personal calendar.*

Thursday
March 14, 96

Tori Amos
NY, NY USA

Now Up-to-Date, the Now Software logo, and "It's about time." are trademarks of Now Software, Inc.; Windows is a trademark of Microsoft Corp.; Macintosh and Mac OS are trademarks of Apple Computer, Inc.; the Atlantic Records logo is a trademark of Atlantic Recording Corporation; Four11 is a trademark of Four11 Corp.

Circle 164 on reader service card

Taking Graph "Snapshots" in Excel

Q I model my company's inventory in an Excel worksheet, changing the underlying assumptions for different scenarios. I'd like to keep a graph for each scenario, but the graph changes as I change the data in a worksheet. For a given data set, I'd like to take a "snapshot" of the graph, change the data to create a new graph, take a snapshot, and so on. How do I get the snapshots?
Milton Edwards,
Chapel Hill, North Carolina

A The easiest solution is to copy the graph, then paste it back as a picture. Once you've entered a set of data, select the graph, choose *Edit•Copy*, go to a blank area of the worksheet or to another sheet, and choose *Edit•Paste Special*. In the Paste Special dialog box, select *Picture* in the As list, and click *OK*. The resulting graph is just an image of the original, so it no longer changes when you change the data.

Run an Unalarming Excel Macro

Q I've created an Excel macro to copy a large range of data, but when I run it, the macro halts and displays the alert 'Selection is too large. Continue without Undo?' Can I force the macro to continue without showing the alert?
Phil Tometich, St. Louis

A Change Excel's DisplayAlerts property to False by adding the code in **FIGURE 2** to the beginning of your macro. You'll no longer be bothered with alerts like 'Continue without Undo', or 'Save Changes'.

```
Sub BigCopy()
   Application.DisplayAlerts = False
   Range("A1:C15000").Copy (Range("Q1"))
End Sub
```

FIGURE 2: TURN OFF EXCEL MACRO ALERTS by adding this code to the beginning of your macro.

Ever Upward With 1-2-3

Q In our lab, we grow bacteria under varying conditions and count the colonies daily to see if they've increased. I need a list to track growth only. If I found 100 colonies yesterday and 110 today, I'd enter today's date and 10. If I found 108 tomorrow, I'd enter nothing, but if the count was 114 on the next day, I'd enter that date and 6. How do I do this in 1-2-3 release 5?
Gary Bladon, Gainesville, Florida

```
A     A      B      C      D      E      F      G
1   \x     {if newvalue>oldvalue}{\x_1}
2          {let oldvalue,newvalue}
3          {select newvalue}
4
5   \x_1   {select startcell}
6          {select-range-relative 0,0,0,0,@count(a1..a8192)-2,0}
7          {let @cellpointer("address"),@now}
8          {style-number-format "date-long-international"}
9          {r}
10         {let @cellpointer("address"),newvalue-oldvalue}
11         {return}
```

FIGURE 3: RECORD ONLY POSITIVE CHANGES IN YOUR DATA with this 1-2-3 macro.

A When I encounter similar problems in inventory and accounting applications, I use a macro to take values from a data entry cell and pop them into a list. **FIGURE 3** highlights the technique.

To build the model (available on PC World Online as 7hss2.wk4), first enter the macro in Figure 3. Select range A1..A5, then select *Range•Name*. Click *Use Labels*, then *OK*. Click *New Sheet*, and enter the labels in range A1..B4 of the figure in the next column. Assign the names **newvalue** and **oldvalue** to cells B1 and B2, and name cell A4 **startcell**. When you first run the macro, enter yesterday's value in cell B2 and today's value in B1, and press **<Ctrl>-X**.

The macro compares the count you enter in B1 with the previous count in B2. If it's larger, the macro locates the next empty cell in column A, enters the current date, assigns a format, then puts the increase into column B. Finally, it puts the current count into B2.

Here are the details:

{if newvalue>oldvalue}{\x_1} executes the subroutine in cell B5 if the new count is greater than the old.

{let oldvalue,newvalue} stores the current count in oldvalue.

{select newvalue} returns to the data entry cell for the next value.

{select startcell} activates cell A4.

{select-range-relative 0,0,0,0,@count (A1..A8192)-2,0} selects the next blank cell in column A.

List | Macros

	A	B
1	New value	109
2	Old value	109
3		
4	Date	Increase
5	08/26/95	10
6	08/27/95	6
7	08/29/95	3
8	09/01/95	11
9		

{let @cellpointer("address"),@now} puts the current date in the active cell.

{style-number-format "date-long-international"} assigns the 12/31/93 format to the active cell.

{r} moves the pointer to column B.

{let @cellpointer("address"),newvalue-oldvalue} enters the amount of the increase in column B.

{return} ends the macro.

By Richard Scoville

PC WORLD online *The file cited in this article is available on PC World Online. Contributing Editor Richard Scoville is a software training consultant in Chapel Hill, North Carolina.* Spreadsheets *welcomes your questions and tips and pays $50 for published items. See page 14 for contact information.*

C O M P U T I N G W I T H O U T L I M I T S™

WANT A 486 UPGRADE THAT OUTPERFORMS INTEL? FOR $139 YOU CAN PUT KINGSTON INSIDE.

Making your 486 run like a Pentium® doesn't take magic. It just takes a TurboChip™ and a little pocket change. Instantly, you will have 5 x 86 clock-quadrupled technology that will help your system run three times faster. And the TurboChip has all the power you need to run today's demanding software, whether you have a 486-based DX2, DX, SX2, or SX system. So how does the TurboChip compare to Intel's OverDrive®? Not only does the TurboChip beat the OverDrive in price, compatibility, and warranty, but in a recent study* it also outperformed it. The TurboChip is designed with AMD's Am 5 x 86–P75 CPU and upgrades with most IBM-compatible desktop systems. And since the TurboChip is a chip-for-chip replacement upgrade, it's easy to install. Plus it preserves your system configuration. To find your nearest Kingston® distributor call our toll-free number; (800) 588-5517.

Kingston® TECHNOLOGY CORPORATION

For more information call us at (800) 588-5517 ISO 9001 SGS *Visit our Web site: http://www.kingston.com/pcw.htm*

CPU by AMD Am5x86-P75

*Wintach test, Advanced Micro Devices, 1995. Kingston Technology Corporation, 17600 Newhope Street, Fountain Valley, CA 92708 USA, (714) 435-2600, Fax (714) 435-2699. © 1996 Kingston Technology Corporation. All rights reserved. Kingston is a registered trademark and Computing Without Limits and TurboChip are trademarks of Kingston Technology Corporation. All other registered trademarks are the property of their owners.

Circle 128 on reader service card

WORD PROCESSING Q&A

Stop Bumping Text From Bottom of Page

Q When I create a document in Word 6.0 for Windows, lines or whole paragraphs sometimes move from the page I'm typing on to the next page, causing large bottom margins. Where do I find the setting that stops this?
Eric Hart, Glendale, Arizona

A Several paragraph settings in Word determine where page breaks occur. Fortunately, they're all in one place.

Here are the instructions for changing the settings once and for all. The steps, which are illustrated in **FIGURE 1**, work in both Word 6.0 for Windows and Word 7.0 for Windows 95.

1. In a blank document, select *Format•Style*. In the Style dialog box, make sure *Normal* is highlighted in the Styles list, and click *Modify*.
2. In the *Modify Style* dialog box, click the *Add to Template* option, then the *Format* button; select *Paragraph*.
3. In the *Paragraph* dialog box, click the *Text Flow* tab. Click each marked option in the Pagination frame to remove its check mark.
4. Click *OK* twice, then click *Close* to return to your blank document. Select *File•Save All* and click *Cancel* when prompted to save your blank document. Word will save your changes in the normal.dot template.

Turn Off Word's Text Flow Controls

❶ Select Format • Style. Select the Normal style from the Styles list and click the Modify button (not shown).

❷ Click the Format button and select the paragraph format.

❸ Click the Text Flow tab and uncheck all text flow controls.

❹ Save your changes to the normal.dot template.

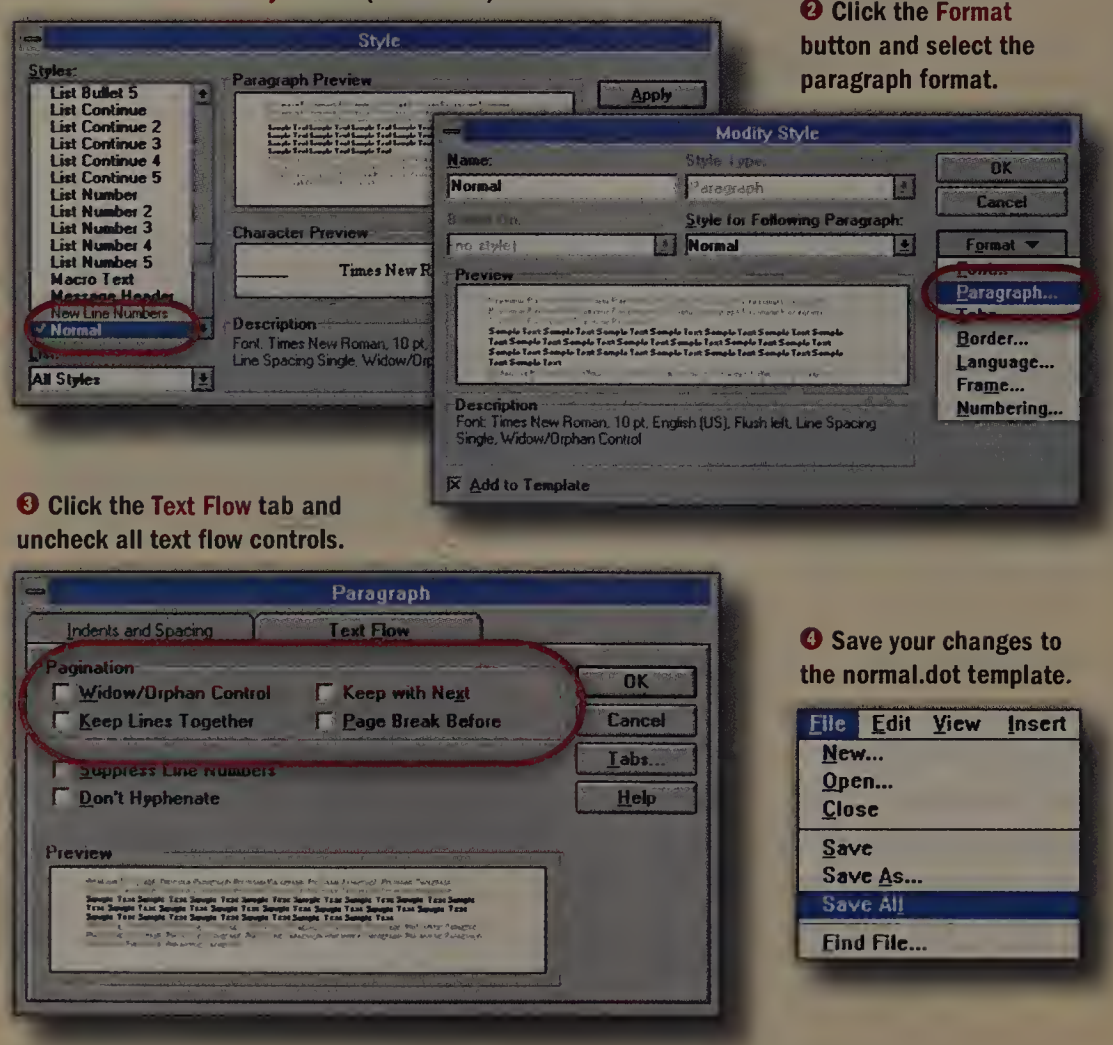


FIGURE 1: WORD'S PARAGRAPH FORMAT includes several settings that determine where a document's page breaks occur. Because the settings are all in one place, they're easy to change.

Save a WinWord Template as a Document

Q I want to use a file in Word 6.0 for Windows as a document template. In the Save As dialog box, I selected the Document Template file type and saved the .dot file in the Template directory. When I open this file and add text, though, Word won't let me save the new file as a regular document. Even when I type the file name with the .doc extension, Word saves the file as a template and grays out all other options in the Save As dialog box. What am I doing wrong?
Jerome Raso, Guelph, Ontario

A Word won't let you save a template file as a normal document if you opened the template with the File• Open command. That's how the application protects its templates from being corrupted by unwanted changes.

To create a new document based on a template, select *File•New*, then choose from the Template list in the New dialog box. You'll be able to save the new file as a normal Word document without affecting the template.

Leave Page 1 Unnumbered in Word 7.0

Q I type my school papers in Word 7.0 for Windows 95. To add page numbers, I select View•Header and Footer and click the page number button on the toolbar. This prints the page number on every page, but the standard at my school is to leave the first page unnumbered. I end up having to print the first page separately. Do you have a better solution?
Josh Rednik, Cherry Hill, New Jersey

A Next time you want to insert page numbers in a Word 7.0 document, select *Insert•Page Numbers* instead of using the Header and Footer toolbar. In the Page Numbers dialog box, select a position and alignment, then click the *Show Number on First Page* check box to deselect that option, as in

NEW PROCOMM PLUS 3.0

Some people are more connected than others.

They cruise the Net. They download files. They fax on-line. And now the truly connected will do all this and more from one single software program, new PROCOMM PLUS® 3.0 for Windows.® New to the world is our Connection Directory, the single source for all your data, fax, voice numbers, email, Web, Telnet, FTP and news entries. Just click on a directory entry and PROCOMM PLUS makes the connection. Whether you are just getting started or an expert, the PROCOMM PLUS "Web Zeppelin™" browser is the new way to cruise the World Wide Web. Our Internet access automatically helps you set up an account with a national service provider—or connects to your current provider. New generation fax comes with an all new Fax Manager, OCR and annotation tools. (*This is very cool.*) And data communications includes 36 terminal emulations, all the most popular file transfer protocols, new RIPscrip emulation and a QWK Mail editor to manage electronic mail messages off-line. New PROCOMM PLUS 3.0 connects your connections. It's that simple. So call us at **1.800.474.1547** or check us out at **www.datastorm.com**.

All brands and product names are trademarks or registered trademarks of their respective holders.©1996 DATASTORM. All rights reserved.

Circle 79 on reader service card

VERY CONNECTED™

Internet · Fax · Data

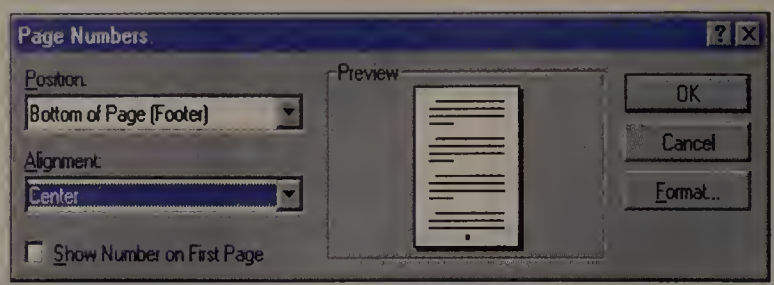


FIGURE 2: START PAGE NUMBERING ON THE SECOND PAGE of a Word document by selecting Insert • Page Number instead of choosing from the Header and Footer toolbar.

FIGURE 2. Click *OK*, and you're done.

To add other information (such as date or time) to the header or footer, select *View•Header and Footer*.

Avoid Unwanted Indents in Word 7.0

Q I've discovered an unusual quirk in Word 7.0. When I'm editing a document and press <Tab> to indent one line in a paragraph, the entire paragraph moves to the right, as if I had indented the whole thing. How do I stop Word from doing this?
Benny Kong, Kalamazoo, Michigan

A You've encountered one of Word's new automated features. By default, when you press the <Tab> key on any line of a paragraph other than the first one, Word assumes that you want the whole paragraph indented.

Fortunately, you can turn this feature off. Select *Tools•Options*, click the *Edit* tab in the Options dialog box, uncheck *Use Tab and Backspace Keys to set Left Indent*, and click *OK*. Word will now let you indent single lines in a paragraph.

Keep Creation Date from Evolving in WordPerfect 6.1

Q I use the Insert•Date feature in WordPerfect for Windows to insert the date I created a document, but each time I open the file to read it, the date changes to that day's date. How do I keep the date from changing, without typing it in manually?
Jeffrey Mehler, Old Lyme, Connecticut

A Simple. Just select *Insert•Date*, as you've been doing, but in the next submenu, select *Date Text*, rather than Date Code. WordPerfect won't update a date that's in the Date Text format when you reopen the file. To speed things up even more, press **<Ctrl>-D** to insert the date in Date Text format.

Split the Screen to Edit a Long Document

Q I'm used to working with UNIX's Emacs editor, but when I work on a stand-alone PC, I use WordPerfect 6.1 for Windows. Emacs can split the screen and let me work on two parts of a file at the same time, updating it in both windows. Can WordPerfect do this?
Robert Y. Eng, Redlands, California

A Unfortunately, WordPerfect lacks split-screen editing. You can load two copies of the same document into different windows, but you can't save the second copy with the same file name, and changes you make in one window are not reflected in the other.

Both Microsoft Word and Lotus Word Pro (but not Ami Pro) do have split-screen editing. In Word 6.0 and 7.0, open a document, then select *Window•Split*. In Word Pro, select *View•Split Left-Right* or *View•Split Top-Bottom* (see **FIGURE 3**).

Make Lotus Word Pro Faster

Q In the May issue, you suggested several ways to speed up Word Pro. I followed your advice on my Windows 3.1 version, but it's still slow. Do you have any other tips?
Andrea Wilson, Denver

A Yes. First, Lotus has released an Update Kit for the Windows 3.*x* version of Word Pro that improves performance for launching the program and for opening and saving files. The free kit also fixes a few bugs. To get a copy, call Lotus Customer Service at 800/343-5414. Have your program disks or CD-ROM in front of you when you call. This update is not available online.

Second, you can dramatically improve the launch time for both the Windows 3.*x* and Windows 95 versions of Word Pro by reducing the number of TrueType fonts you have installed to less than 100. Be sure, though, not to delete any Arial or Times New Roman fonts, or any font that begins with the letters MS. Your system needs these fonts, and your programs may display strange characters in dialog boxes and elsewhere if you delete them.

To trim down your font list in Windows 3.1, go to the Control Panel, double-click *Fonts*, select a font you don't use, and click *Remove*. In Windows 95, double-click the *Fonts* icon in the Control Panel, right-click the font you don't want, and select *Delete* from the menu.

Finally, if you work with old Ami Pro files, your work will go faster if you convert them to Word Pro format. The File•Import command does this better than File•Open. Be sure to save the files in Word Pro format after editing.

By George Campbell

George Campbell is a contributing editor for PC World *and a contributor to* The PC Bible *(Peachpit Press, 1995, 800/283-9444).* Word Processing *welcomes your questions and tips and pays $50 for published items. See page 14 for contact information.*

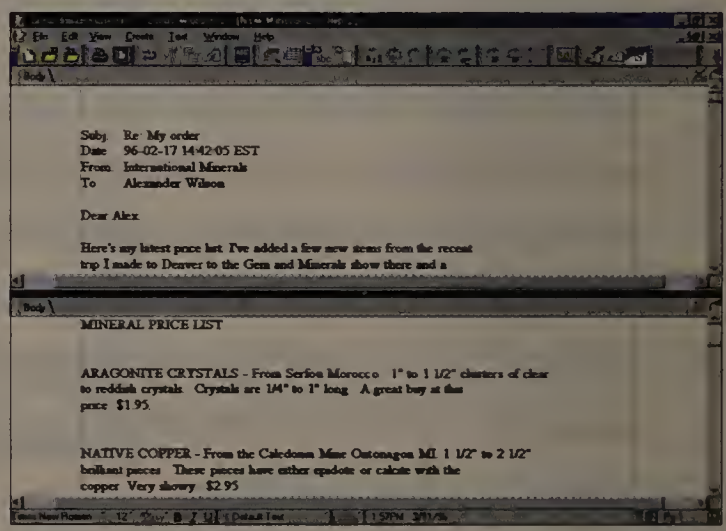


FIGURE 3: WORK ON TWO PARTS OF A LONG DOCUMENT at the same time with Word Pro's split-screen editing feature (also available in Word, but not in WordPerfect or Ami Pro).

LAND ANYWHERE!

THE CORDLESS, PORTABLE TAPE DRIVE

Now, get the convenience of an internal tape drive and the flexibility of an external tape drive–without the cord! The eagle™ Nest™ TR-3 Tape Drive makes it possible to share one tape drive among PC users. That makes it the lowest-cost-per-megabyte data storage solution you can buy.

Eagle Nest TR-3 is great for multiple-PC offices and workstation backup. It's easy to transport files between home and office PCs. Just remove the tape drive and take it with you.

There's more good news. Eagle Nest TR-3 Tape Drive is faster than any parallel-port option. Plus, you get flexible backup capacity–up to 4.4 GB compressed. All with the security of Exabyte's two-year standard warranty and toll-free worldwide technical support.

Get ready to land anywhere with eagle Nest TR-3 Tape Drive! Contact us for more information.

With the Nest installed in your PCs, the eagle Nest TR-3 Tape Drive is easily transported among PC users.

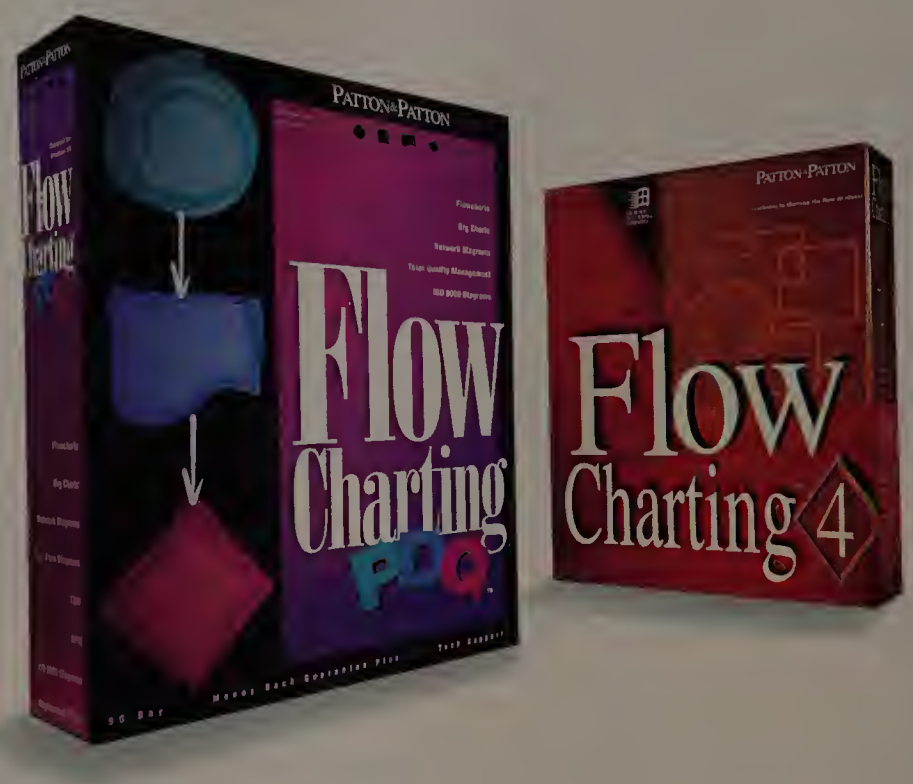
EXABYTE®

EAGLE™

1-800-EXABYTE
Visit our web sight at: http://www.exabyte.com

Circle 92 on reader service card

Being called **simple** used to be an insult. We take it as a compliment.



For complex diagramming, new **Flow Charting PDQ**™ for Windows 95© and **Flow Charting**™**4** for Windows 3.1x really are simple. Easy to learn. Even easier to use. With intuitive commands and a streamlined design, you'll learn to build flowcharts **quickly.** Produce basic to complex diagrams with **flexible** tools for Flowcharts, Org Charts, Network Diagrams, TQM, ISO 9000, BPR, Data Flow Diagrams and more. If you want to focus on business **solutions** instead of business software, simply call **(800) 525-0082,** ext. 373. And when you do, we'll really take it as a compliment.

PATTON&PATTON

The First Name in Flowcharting

(408)778-6557 http://www.patton-patton.com Fax:(408)778-9972

Circle 168 on reader service card

All trademarks or registered trademarks are the property of their respective owners.

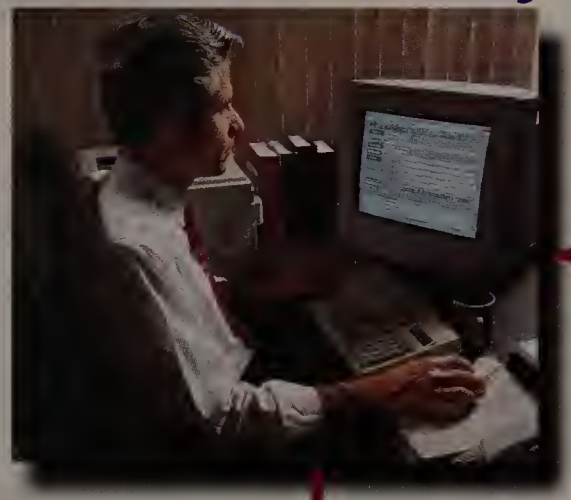
Surveys by E-mail & Internet? They're now *fast* and *easy* with

Decisive Survey™ for Windows

- Track customer satisfaction
- Gather employee feedback
- Profile web site registrants
- Turn sales leads into qualified prospects
- Eliminate costs and delays of postage, phone calling, and data entry
- Automate follow-up action
- Get results in hours, not weeks!

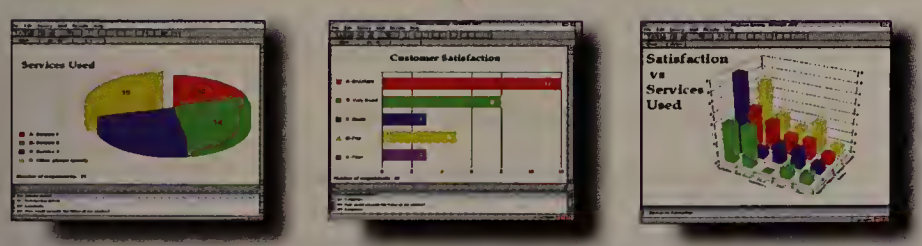
1. Create a survey

Type in questions and choices, select questions from the library, or tailor one of many survey templates to your exact requirements.



2. E-mail it

Any e-mail user can receive and respond to your survey...from across a corporate network, the Internet, AOL, CompuServe...from a PC, Macintosh, UNIX workstation, terminal, or any other platform.



Decisive Survey collects responses from your mailbox and tabulates results. In seconds, view charts, tables, comments, crosstabs, and statistics. Identify customers who meet specific criteria for follow-up action, and reply with e-mail messages tailored to their responses.

3. Results produced automatically

For a test drive, call 1-800-987-9995
or visit www.decisive.com

Decisive Technology Corporation

Circle 80 on reader service card

1020 Corporation Way, Suite 100 ▪ Palo Alto, CA 94303 ▪ (415) 528-4300 ▪ Fax: (415) 967-6035 ▪ info@decisive.com

INSTANT INTERNET.

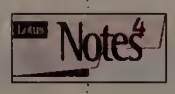
No Hassles, No Headaches, No Hardware.

"Clearly the easiest and fastest way to the Internet!"

Roger Baron, Golden Bear Int'l

Now with the Fabrik Service™, you and your entire company can be sending email over the Internet in a matter of minutes, without adding expensive gateways, software or hardware.

The Fabrik Service works directly with cc:Mail, Lotus Notes or MS Mail, letting employees send Internet email using their existing software.



Each user gets a personal Internet address, such as johndoe@acme.com, and your company gains an Internet presence with a custom domain name. Most importantly, your system is secure from unwanted intrusion.

If you want instant Internet, just add Fabrik. Have your LAN manager call us today.

FREE 30-DAY TRIAL

-Call Today-

1.800.732.2745

www.fabrik.com

fabrik communications, inc.

150,000 registered email users and growing

Circle 101 on reader service card

100 Bush Street, Suite 1100, San Francisco 94104. Offer subject to change without notice. © 1996 Fabrik Communications, Inc. All trademarks are property of their respective holders.

Get ready for an unbeatable online experience including the Internet.

Mail this card or call 1-800-487-4838.

Send me free CompuServe software now. And give me 10 free hours of service.

Name _____ Company _____

Address _____ City _____ State/Province _____

Zip/Postal Code _____ Day Phone _____ Evening Phone _____

☐ CD ROM ☐ Windows ☐ Mac ☐ Other _____

New members only. One free membership per household, please.

#PWW7/96

CompuServe®

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 4650 COLUMBUS OH

POSTAGE WILL BE PAID BY ADDRESSEE

COMPUSERVE
P O BOX 182680
COLUMBUS OH 43272 - 0327

CompuServe gives you the Internet.

[As if our 3,000 online services weren't enough.]

What do you get when you combine the world's largest online service and the vast network of 30 million Internet users? The simplest way to connect to the whole world at once. Because CompuServe gives you one-stop access to the Internet, plus thousands of our own services online. And to prove it's the easiest way to connect to people and information worldwide, we'll give you ten free hours of exploration time in the first month. And five free hours every following month.

With a membership to CompuServe, you get thousands of engaging services. Like *Time* Magazine, *Sports Illustrated*, *People* Magazine, *Rolling Stone*, music and movie clips, Comedy Central, Roger Ebert's Movie Reviews, games and Wall Street reports. There's also the widest selection of professional and technical forums of any online service. Plus the World Wide Web and global e-mail.

Just give us a call (or you can go to www.compuserve.com if you're already wired) to receive:

1. Free CompuServe software.
2. One free month of CompuServe membership (a $9.95 value). Membership includes five free hours each month, with additional online time only $2.95 per hour!
3. BONUS! Five additional hours online during your first month of membership for a total of ten free hours.

Call 1-800-487-4838 Today

©1996 CompuServe, Inc. New members only. Limit one membership per household. Some additional charges may apply.

CompuServe®

Circle 33 on reader service card

Acer

AcerPower P100
Business Multimedia Desktop

Monitor Sold Separately

- 100MHz Pentium
- 1GB HDD, 8MB RAM, 256K L2 cache
- 6x CD-ROM Drive
- 3-Watt external speakers
- Creative Labs Sound Blaster 16 Sound Card
- Preinstalled Windows 95, Lotus SmartSuite 1996, Quicken SE 1996

$1499

28805

FRACTAL PAINTER 4.0
ONLY $199.95 with system purchase while supplies last! #27486

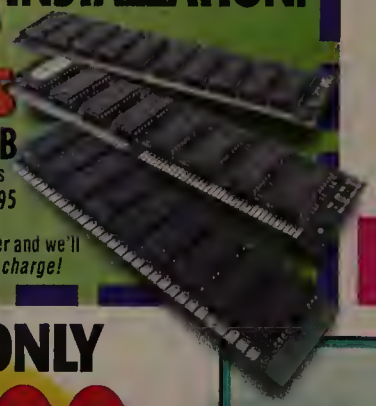
CALL 800-800-2787 to order!

FREE! MEMORY INSTALLATION!

SIMMS

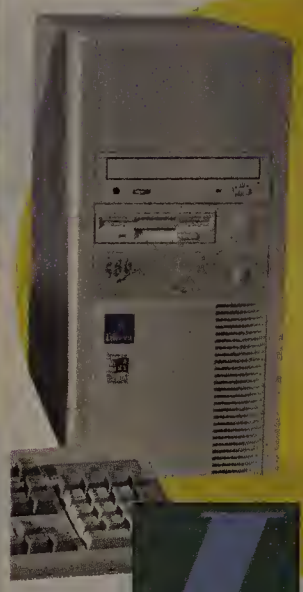
4MB	8MB	16MB	32MB
as low as $59.95	as low as $119.95	as low as $269.95	as low as $549.95

Purchase a computer & memory upgrade together and we'll install your new memory upgrade *at no extra charge!*



PC

FREE TECH SUPPORT • NE



ONLY **$899** 28337

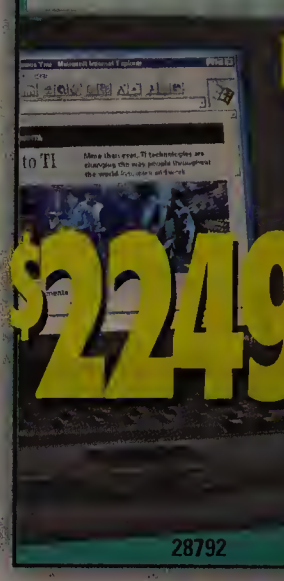
Inteva 5x/133MHz Mini-Tower

- AM5x86/133MHz proc.
- 4MB RAM, upgradeable to 128MB
- 850MB hard drive
- Windows 95 keyboard, Microsoft Mouse & Inteva Mouse Pad
- Windows 95 preinstalled
- 3 Year Warranty

Inteva

TEXAS INSTRUMENTS

Extensa 510



$2249 28792

- 100MHz Pentium PCI Bus Architecture
- 8MB RAM, upgradeable to 40MB
- 10.4" dual scan display
- 810MB HDD, 16-bit audio sound
- Built-in speaker & microphone
- Dual boot one-time [illegible] Windows [illegible] or Windows 95

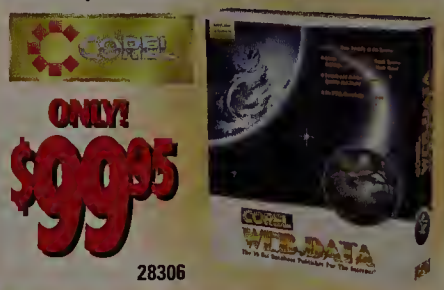
AT&T CAPITAL CORPORATION
LEASING SERVICES

Available to businesses with 2+ year history
Minimum purchase $1,000 (Hardware)
or Minimum purchase of $3,000 (Software)
Flexible payment terms* Corporate hours 9 a.m.-7:30 p.m.
*Payments shown in catalog based on Fair Market Value—36 month term

For Leasing Specifics From Our Corporate Account Managers
Call 800-800-0014

Easy Internet Publishing!

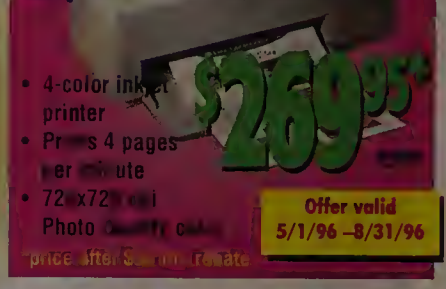
Publish your data directly to the Internet in an attractive and usable format, making it instantly available to a worldwide audience.



ONLY! **$99.95** 28306

$30 REBATE

EPSON Stylus Color II



- 4-color inkjet printer
- Prints 4 pages per minute
- 720x720 dpi Photo Quality color

$269.95*

*price after $30 mfr. rebate

FREE Look Your Best Color Pak Includes: Software on CD & color tips booklet. A $249 VALUE!

Offer valid 5/1/96 –8/31/96

COMPUTERS

25745	AcerNote Pro 954 75MHz Pentium	$2199.
24248	Compaq LTE 5000 5/75 Notebook	2869.
24393	Compaq ProLinea 5100E Desktop	1459.
26706	IBM PC330 166MHz Desktop	2599.
28729	IBM ThinkPad 760E SLIM 120MHz 12.1"TFT	4999.
28728	IBM ThinkPad 760EL, 100MHz 111.3" DS	3399.
28724	IBM ThinkPad 760ELD	4499.
28241	Inteva P100 16/1.2 GB HD	1299.
28580	MDS 5/100 CD MiniTower	1399.
25090	MDS Notebook P75- 800MB CD	2549.
28790	TI Extensa 570CD	2899.
27034	TI TravelMate 5200 SVGA	4099.
24944	Toshiba T610CT/P90, 9.5" TFT	3199.
25180	Toshiba Tecra 700CS, 120MHz Pentium	4199.

EDUTAINMENT

2333	Broderbund Myst CD	$44.95
23441	Edmark Thinkin' Things 3 CD	42.95
27394	Elec. Arts Wing Commander IV	54.95
26769	Mech Warrior 2 & Expansion Pack	69.95
15783	Davidson Math Blaster CD	35.95
28140	Maxis Sim City 2000 Special Edition	44.95
24145	Infopedia 2.0 w/Free Me and My World	49.95

COMMUNICATIONS

27617	Cardinal MVP 288I2 Faxmodem	$129.95
11396	Hayes ACCURA 144+FAX144	94.95
17471	Megahertz XJ2288 PCMCIA Fax	259.95
4410	Microcom Carbon Copy-Windows	89.95
21046	NetManage Internet Chameleon	24.95
17963	Practical Peripherals PM288HCII V.34	159.95
7779	Server Tech Remote Power On/Off	119.95
18712	Spry Internet In A Box	39.95
23211	SupraExpress 288i PnP	129.95
25408	Symantec pcANYWHERE Win 95	139.95
25054	WinFax Pro 7 for Win 95	84.95
17468	Zoom 28.8 Internal Faxmodem	149.95
23610	Zoom 28.8 Internal Fax/Voice/Speaker	199.95

UTILITIES

19989	Connectix RAM Doubler	$54.95
26128	Dr. Solomon's AntiVirus Toolkit for Win 95 w/ quarterly update	79.95
28662	Microsoft Internet Info Server	99.95
22141	Norton Utilities Win95 Tradeup	59.95
25638	Quarterdeck QEMM 8	64.95
22148	Symantec AntiVirus Win95 Tradeup	29.95
25801	Vertisoft RemoveIT! 95	34.95

BUSINESS

12868	AEC Fasttrack Schedule	$169.95
13156	All Clear for Windows	179.95
25479	Claris FileMaker Pro 3.0 Upgrade	99.95
25306	Lotus Word Pro 96 w/rebate	49.95*
	*After $20 rebate for owners of any other Lotus Desktop or Communications product	
22315	Microsoft Excel 95 Upgrade	99.95
28662	Microsoft Internet Info Server	99.95
22294	Microsoft Plus! for Windows CD	44.95
22289	Microsoft Project Windows 95	449.95
23871	Microsoft Publisher for Windows 95	74.95
22293	Microsoft Word for Win95 Upgrade	99.95
26388	Microsoft Visual C++ 4.0 Upg w/Subscr	349.95
22974	Visio for Windows V4	139.95

ACCESSORIES

16559	APC Back-UPS 280	$99.95
25034	OPTI-UPS/Viewsonic UPS-420E (Intelligent UPS)	169.95
1305	Targus Universal Ntbk Case *(black)*	69.95
20025	Tripp Lite Super 7 Surge w/Tel.	24.95

INTERNATIONAL CUSTOMERS

Please call 603-446-0003 or fax 603-446-7791. Additional charges & restrictions may apply.

NEW COLOR QUICKCAM!

Purchase Connectix new Color QuickCam to capture still and full motion images and get Internet Valet FREE!

Reg. $29.95

$199.95* 28830

Connectix

FREE with Color QuickCam purchase!

• Price after $30 mfr. rebate
Rebate expires 7/31/96

Sportster 28.8 Winmodem

- Plug & play, with auto installation
- Broadcast and schedule faxing

ONLY! **$149.95** 27821

Greet with Windows 95

OUR POLICY • VISA, MASTERCARD, AMERICAN EXPRESS, and DISCOVER cards. No surcharge. • All of our products are covered by manufacturer's warranty. • All returns require prior authorization; please call for an RMA • We are not responsible for typographical errors. • Pricing and promotions are subject to change without notice.

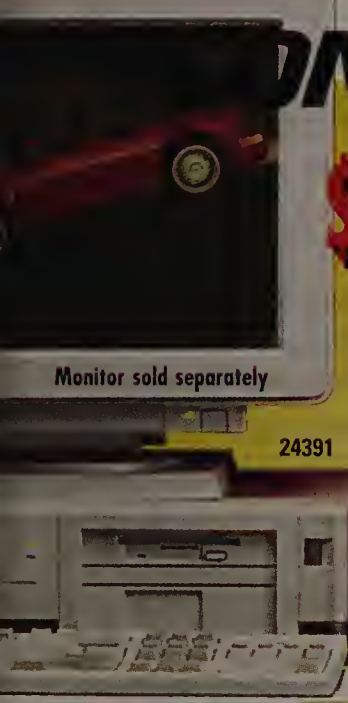
Continental U.S.: Shipping Charges: $5 per order up to 10 pounds. On orders weighing 10 pounds or more, shipping is $1 per pound. Please call for weight/shipping charge information. Barring events beyond our control, all credit card orders phoned in weekdays by 3 a.m. ET will ship Airborne Express for delivery the next business day. Saturday delivery available to many areas upon request at no additional charge. Order all day Saturday thru noon Sunday for Monday delivery. Some areas require an extra day delivery. **APO/FPO, International orders and Hawaii, Alaska, Canada, Puerto Rico & U.S. Virgin Islands:** Shipping may require additional time and charges. All other areas: Call 603-446-0003 or FAX 603-446-7791 M-F 9 a.m.-5:30 p.m. ET.

©1996 PC Connection, Inc., Marlow, NH. PC Connection & the raccoon characters are registered trademarks of PC Connection, Inc. All other trademarks remain the property of their respective companies.

Connection®

DAY DELIVERY • AWESOME SERVICE • BEST PRICING & SELECTION • CUSTOM SYSTEMS OVERNIGHT!

COMPAQ



Monitor sold separately

24391

$1349

Prolinea 575E

- 75MHz Pentium
- 8MB RAM, 630MB HD
- Windows95 pre-installed
- 3 Slots/ 3 Bays
- Plug & Play compliant

NEW AcerNote Light 356

- Intel 100MHz Pentium processor
- 8MB RAM, upgradeable to 40MB
- 10.4" color display
- 810MB HD, built-in floppy drive
- Pre-installed software including Windows 95, Quicken SE 96 and Sidekick 95

Acer

EXCLUSIVE OFFER! SAVE $10 on Kensington Deluxe Carry case with any laptop purchase! Ask for Item #28857

ONLY **$1899**

29151

NOW ONLY! $1999

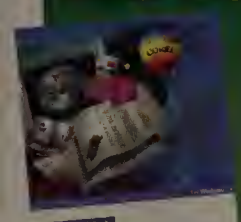
ThinkPad 365E 28813

- 100MHz Cyrix 5x86C processor
- 8MB RAM (upgradeable to 24MB)
- 540MB hard drive
- ISA bus, 10.4" VGA DSTN display
- NiMH battery
- FREE Netscape Navigator

IBM Business Partner

SAVE $100 when you add in an IBM 28.8 PC card modem! Ask for # 29362

NEW From COREL



Includes: WordPerfect, Quattro Pro, Presentations, CorelFLOW, Sidekick, Envoy, Dashboard and more!

COREL WordPerfect

$94.95

CD UPGRADE ONLY! 28839

28841	Version/Competitive Upgrade (disk & CD)	$139.95
28834	Full Version (CD)	279.95
28840	Full Version (disk & CD)	329.95

100MHz Power

UPGRADE ONLY!

$99.95

26397 improve it technologies®

Make-it 486DX4
Upgrade your 286, 386 or 486 to clock-tripled speed!

Make-it 586
Run the latest, processor-intensive Windows applications! 26398 $169.95

CAPTURE & SAVE

Capture images and store them with this EXCLUSIVE bundle: Iomega Zip Drive, 3 100MB Zip Disks and Connectix QuickCam (grayscale version)!

ONLY **$299.95**

29120

Bundle with Color QuickCam **$399.95***

29117

*price after $30 mfr's rebate

Iomega

Viewsonic Optiquest 1769DC

- 17" color monitor
- 1280x1024 maximum resolution
- .28mm dot pitch
- 85Hz refresh at 1024x768
- MPR-II & VESA-DPMS compliant

NEW LOW PRICE **$599**

25030

INPUT/OUTPUT

21345	Adesso TruForm Keyboard	$59.95
28931	Brother HL720 Laser Printer	369.
28860	Caere DmniPage Pro Win95 Upg. 7.0	129.95
28641	Casio QV-10A Digital Camera	399.
26481	Cirque Wave Keyboard	99.95
25695	Kensington Expert Mouse 5.0	99.95
21279	Logitech Mouse Man Combo	45.95
23536	Okidata OL600E Laser Printer	399.
28081	Wacom ArtPad 2 & Painter 4.0	349.
27905	Xerox TextBridge 96 Upgrade	129.95

NETWORKING

11105	3COM EtherLink III TP	$109.
27762	3COM Office Connect TPD Hub	149.95
26190	Artisoft Lantastic Win95 1-User	89.95
27780	Bay NetGear 8-Port Hub	159.95
21249	Farallon Timbuktu Pro Windows	139.
24366	Intel PRD 100 PCI-8	149.
22228	Lancast 10T Transceiver	27.95
27940	Lite-On 10/100 PCI	139.95
11006	MDS 10-T Adapter	29.95
18994	Novell NetWare 4.1 5-User 3.5"	799.
22687	Xircom 28.8 Modem & 10T Ethernet	469.

MULTIMEDIA/VIDEO

16747	ATI Graphics Xpression 1M8	$99.95
27723	C. Labs Blaster CD 8X	249.95
27083	C. Labs Sound Blaster 16 Value Ed PnP	99.95
27722	Diamond Edge 3D 2M8	279.95
26885	Kodak DC50 Digital Zoom Camera	999.
25711	MagInnovision DX15T Monitor	429.
21401	Matrox Millennium 2M8	249.
28033	MDS 8X CD-ROM Drive Internal	199.95
23787	Number Nine Imagine 128	299.95
27798	Paradise Tasmania 3D	199.95
21793	Viewsonic 15ES 15" Monitor	369.

GRAPHICS & DESIGN

13109	Adobe Illustrator & Photoshop	$599.95
22197	Adobe PageMaker 6.0	549.95
16661	Adobe Photoshop 3.0	569.95
22970	CorelDRAW! 6.0 Upgrade from 5	229.95
24536	Fractal Painter - Windows	359.95
24511	MetaTools Kai's Power Tools 3.0	129.95
28077	Macromedia Director 5.0	869.95
22081	Macromedia FreeHand 5.0 CD	399.95
29399	Strata Media Forge - Win95/Win NT	949.95
29398	Strata Media Paint for Win95	389.95

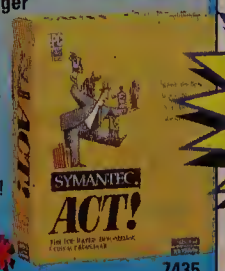
STORAGE

27347	Conner Filepro 4.2GB SCSI	$999.
28096	HP 4020 Recordable CD Internal	999.
28347	Seagate 1GB ATA 10E	249.
22801	SyQuest EZ135 External SCSI	199.95
20636	Western Digital Caviar 1.2GB IDE	269.

$50 CASH REBATE

Business contact manager software

- Full word processor with built-in formats
- Webster's dictionary, spell check, E-mail support
- Appointment scheduler, report generator and MORE!



ONLY! **$139.95***

7435

*After $50 mfr. rebate

SYMANTEC

BCS THE BOSTON COMPUTER SOCIETY

Boston Computer Society "Best All Around Company" 2 years in a row!

PC World World Class Award Winner. An unprecedented five times!

CALL TODAY FREE! Catalog

800-800-0003

OR FAX YOUR ORDER
603-446-7791
796PCW

WINDOWS Q&A

Why Don't You Do Windows (Write)?

Q I want to be able to load readme files, format them, print them with page numbers, and save them with the formatting. NotePad allows page numbering and headers but doesn't allow easy font changes and other formatting tools. I like Windows 95's WordPad a lot, but it won't let me number pages or place headers on the printed page. What should I do?

Michel Woody, Deer Park, Texas

A You just need to take a big step backward—to Windows Write. Unlike WordPad, Windows Write permits custom headers and footers complete with automatic page numbering.

If you try to launch Write in Windows 95, you'll usually get WordPad instead. So put aside WordPad by renaming its write.exe file in your Windows folder, or just chuck it. Then restore write.ex_ from your Windows 3.*x* installation disks. To do that, insert the proper floppy, open a DOS window, type **expand**, and press **<Enter>**. Then follow the prompts to restore Write.

Once you've reclaimed your Write, open a file you want to format and choose *Document•Header* or *Document•Footer*, depending on whether you want the page number to appear at the top or bottom of the page.

Type a measurement for Distance from Top (or Distance from Bottom) as in **FIGURE 1**. The header or footer uses this distance as its margin and ignores the margin settings in the Document•Page Layout dialog box (which apply only to body text). Check whether the header or footer should appear on the first page and click *Insert Page #* to add the page number symbol, which in the Write window appears as '(page)'. To add other text to the header or footer, such as the file name or the word *Page* before the page number symbol, move the cursor outside the dialog box and then type. You can format the page number with any font or alignment options you like. As soon as you're done, click *Return to Document*, then format and print, and you're set.

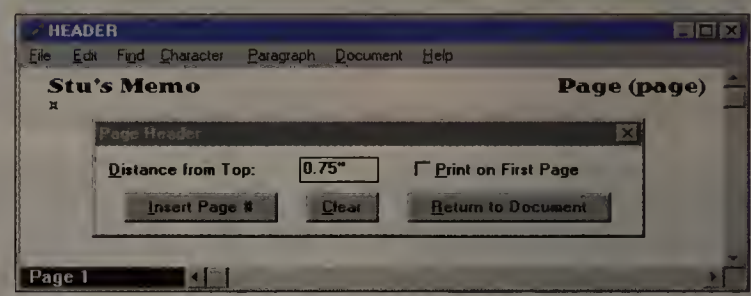


FIGURE 1: WINDOWS WRITE IS WAY AHEAD OF WORDPAD when it comes to page numbering, headers, and footers.

The Case of the Missing Windows 95 Icons

Q When I had Windows 3.1, I dressed up Program Manager with icons from the moricons.dll file in the Windows directory. Now that I have Windows 95, I can't find moricons.dll. Did Windows 95 delete it?

Milo Crandle, Los Angeles

A Not to worry. Chances are Windows is simply hiding all .dll files. If you want to see those files, you can start Windows Explorer or double-click *My Computer*. Choose *View•Options* and click the *View* tab. Click *Show all files* and then click *OK*.

If you'd prefer to leave these files hidden but still have access to them, follow the normal steps to edit an icon: Right-click a Shortcut, select *Properties*, click the *Shortcut* tab, and click *Change Icon*. But now, instead of clicking *Browse*, just type **c:\windows\moricons.dll** (your path may differ) and press **<Enter>**. Select an icon from the group (see **FIGURE 2**) and click *OK* twice. The icons will work as usual, even though moricons.dll remains hidden from Explorer and Browse dialog boxes.

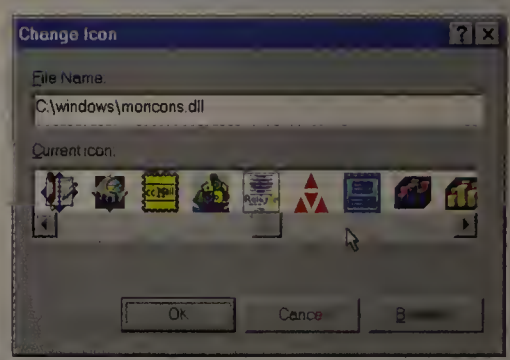
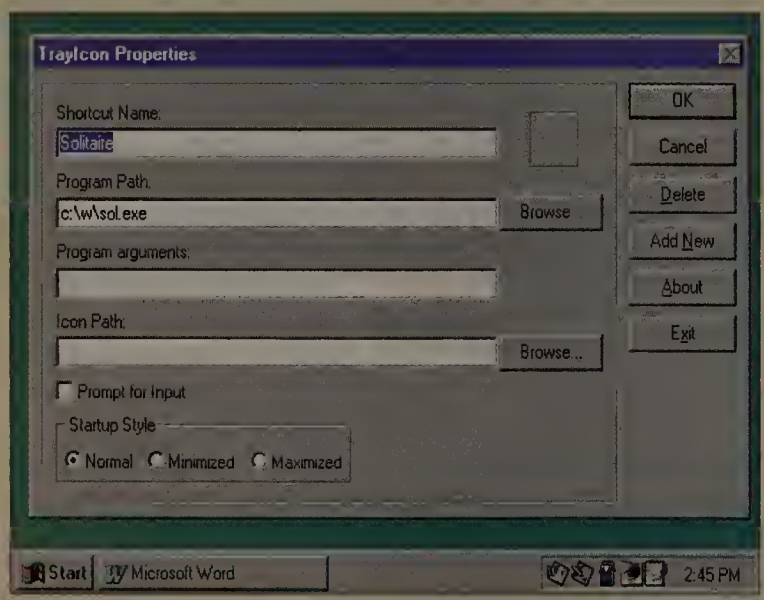


FIGURE 2: FIND ICONS for your Windows 95 Shortcuts in the moricons.dll file.

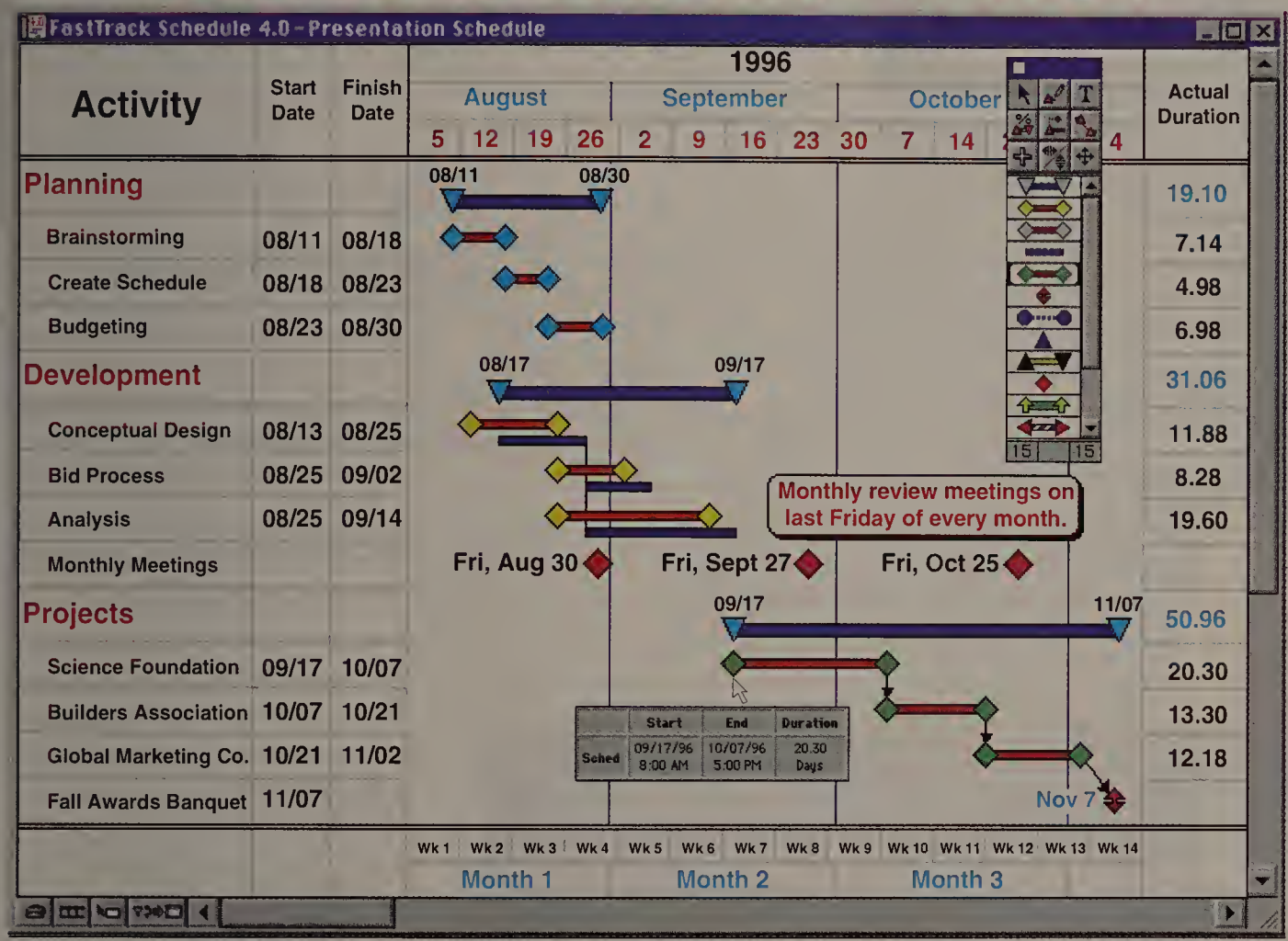
Windows Toolbox: Click It Up



Want a utility that can launch all your favorite applications and documents in a single click? TrayIcon lets you put Shortcuts in the "tray" (the area of the Taskbar at the opposite end from the Start button) for one-click access. You can customize the icon and designate whether a program should start minimized, maximized, or at normal size. You can have your application prompt you for command-line parameters when you launch it. Registration is a mere $5. TrayIcon is the work of Brian P. McCarty, 75121.2130@compuserve.com. It's available on PC World Online as trayicon.zip.

You can't stay on schedule if you don't have one.

New Version 4.0 Full 32 Bit!



FastTrack Schedule™ 4.0

Simple Scheduling. Impressive Power.

FastTrack Schedule 4.0 lets you create and update presentation-quality schedules quickly and easily. Whether you need a quick scheduler or a full tracking system, FastTrack Schedule 4.0 offers the combination of Flexibility, Ease of Use and Power all in one program! Take a quick look at some of the features found in FastTrack Schedule 4.0. Simple Scheduling and impressive power are as easy as...1,2,3.

1 Flexibility

- Timescales from Hours to Fiscal Years
- Link Options • Find & Replace
- Paste in Graphics & Add Textblocks
- Custom Bar and Milestone Styles
- Page Breaks • Shift Items in Work Units
- Capture Schedule Defaults • Hide Graph
- Layout Options for Multi-columnar Reports
- Durations in Work Hours & Work Days

2 Ease of Use

- On Line Help Systems • Tool Tips
- Bubble Help • Action Columns
- Control Palette • Auto Scrolling
- Bar Tracking Window • Select All
- Interactive Page Preview Layer
- Cursor Tracking Window • Quick Corner
- Templates • Floating Toolbox
- Autofit Schedule • Auto Resize Row Height

3 Power

- Scheduled, Revised & Actual Dates
- Custom Work Calendar
- Filters & Sorts • Task Dependencies
- Outline task to show sublevels
- Import & Export Data as ASCII text
- Network versions - File Locking, Passwording
- Now available for Windows 3.1, NT and 95, Macintosh and Power Macintosh

To order, for more information or for a free demo call today!

800.450.1984

http://www.aecsoft.com

Circle 14 on reader service card

AEC SOFTWARE

AEC Software, Inc., 22611-113 Markey Ct., Sterling, VA 20166 USA • Phone 703.450.1980 • FAX 703.450.9786 • http://www.aecsoft.com

©1996 AEC Software, Inc. All rights reserved.
Windows, Windows 95, and Windows NT are registered trademarks of Microsoft Corporation. Macintosh is a registered trademark, and Power Macintosh is a trademark of Apple Computer, Inc.

Designed for Microsoft Windows 95

yes It runs with NetWare

WINDOWS MAGAZINE RECOMMENDED

"FastTrack Schedule... matches or exceeds the competing products in all aspects of project scheduling."

Windows Magazine

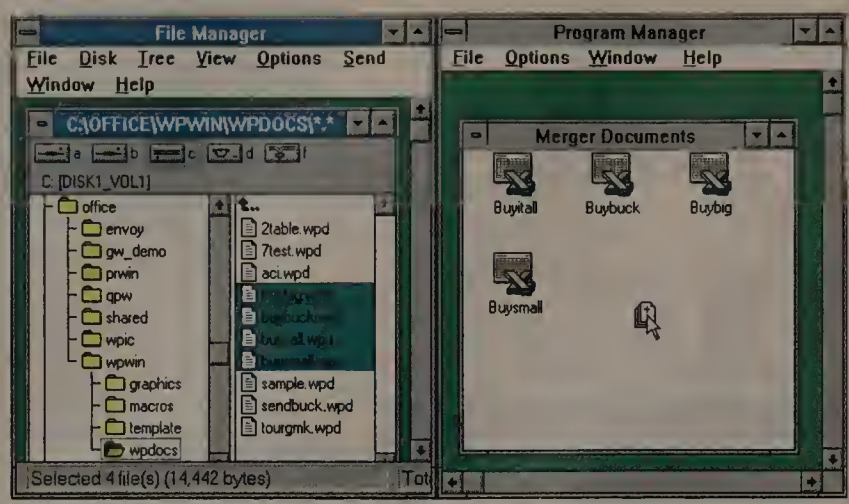


FIGURE 3: CREATE DOCUMENT ICONS in Windows 3.x by dragging and dropping documents into the proper Program Manager group.

Quick Icons for Program Manager

Q I am a Windows 3.1 user and like to have document icons in a Program Manager group so that I can open any of my documents with a double-click. But I don't like to have to create icons one by one, typing in file name after file name (or browsing through a directory tree). Can Windows automatically set up an icon for all of my documents?

Greg Slade, Detroit

A Some word processors contain macros that can add icons for their documents to Program Manager, but the fastest way to do this for any application is with a little drag and drop—and this also lets you create multiple icons in a single bound.

Here's what to do: Open File Manager and arrange things so that Program Manager and File Manager are side by side. The quickest way to get there is to minimize all other windows, then press **<Ctrl>-<Esc>** and click *Tile*. In Program Manager, open the group in which you want to add the icons. In File Manager, open the directory where you keep your documents. Then select all the documents you want and drag them to the Program Manager group. Voilà—instant icons! (See **FIGURE 3**.) If you later delete a document, remember to delete its Program Manager icon, too.

The Mystery of the Dead Ringer in Windows 3.x

Q Ever since I installed a new 14.4-kbps modem, when I start Windows 3.1 I get the following message on a blue screen, after the logo screen but before Windows loads: 'Ring 0 Systems. Virtual 16550 Driver Board was not found in your computer! Virtual 16550 and communication buffering in the DOS box will not work. It may cause lost bytes during the data transfer or any other problems with communication software running under V86 DOS. Press any key to continue.' When I press a key, Windows starts. What does this message mean, and how can I get rid of it?

Steven Shagrin, America Online

A This message occurs when you remove a modem or move it to a different serial port without removing or reconfiguring a Digicom Systems Inc. driver. This pop- ▶

If you think file transfer is all we do, you need some time away from the office.

Designed for Microsoft Windows 95

To appreciate how much more LapLink® for Windows® 95 has to offer, all you have to do is hit the road.

Wherever you go–across the hall, across town or across the country–if you've got LapLink, you have everything you need to access anything you want on your desktop *or* your network.

With this single piece of software, you can read and send e-mail, run databases and custom applications, synchronize data and, yes, even transfer files.

Since there's no need to change applications to do all these things, there's no need to hang up and redial.

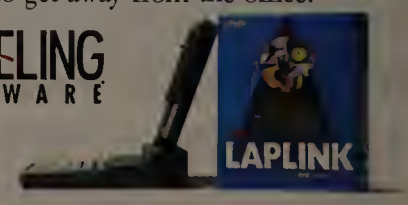
And since LapLink works the same easy, intuitive way over modems, IPX and TCP/IP networks, serial cables, parallel cables, wireless, even the Internet, there's no need to laboriously reconfigure.

And there's no need to worry about compatibility. Our 16-bit version is built right into LapLink for Windows 95, so connecting to Windows 3.1 systems is no problem at all.

By now, you probably can't wait to get your hands on the latest LapLink. So you'll be glad to know that upgrading–from an earlier version of LapLink, or from another product altogether–is ridiculously inexpensive. Call 800-487-4396. Better yet, see your reseller.

It'll give you an excuse to get away from the office.

TRAVELING SOFTWARE



©1996 Traveling Software, Inc. LapLink is a registered trademark of Traveling Software. http://www.travsoft.com

Circle 239 on reader service card

"SUPER ACCOUNTING"

PC WORLD MAGAZINE, January 96

New DacEasy® Accounting & Payroll 95

Why have the experts been busy thinking up new words to praise DacEasy Accounting & Payroll 95? Maybe it's because the customizable interface gives you accounting flexibility that no other system can match. DacEasy not only helps your business grow, it grows with your business!

Faster Than a Speeding Bullet

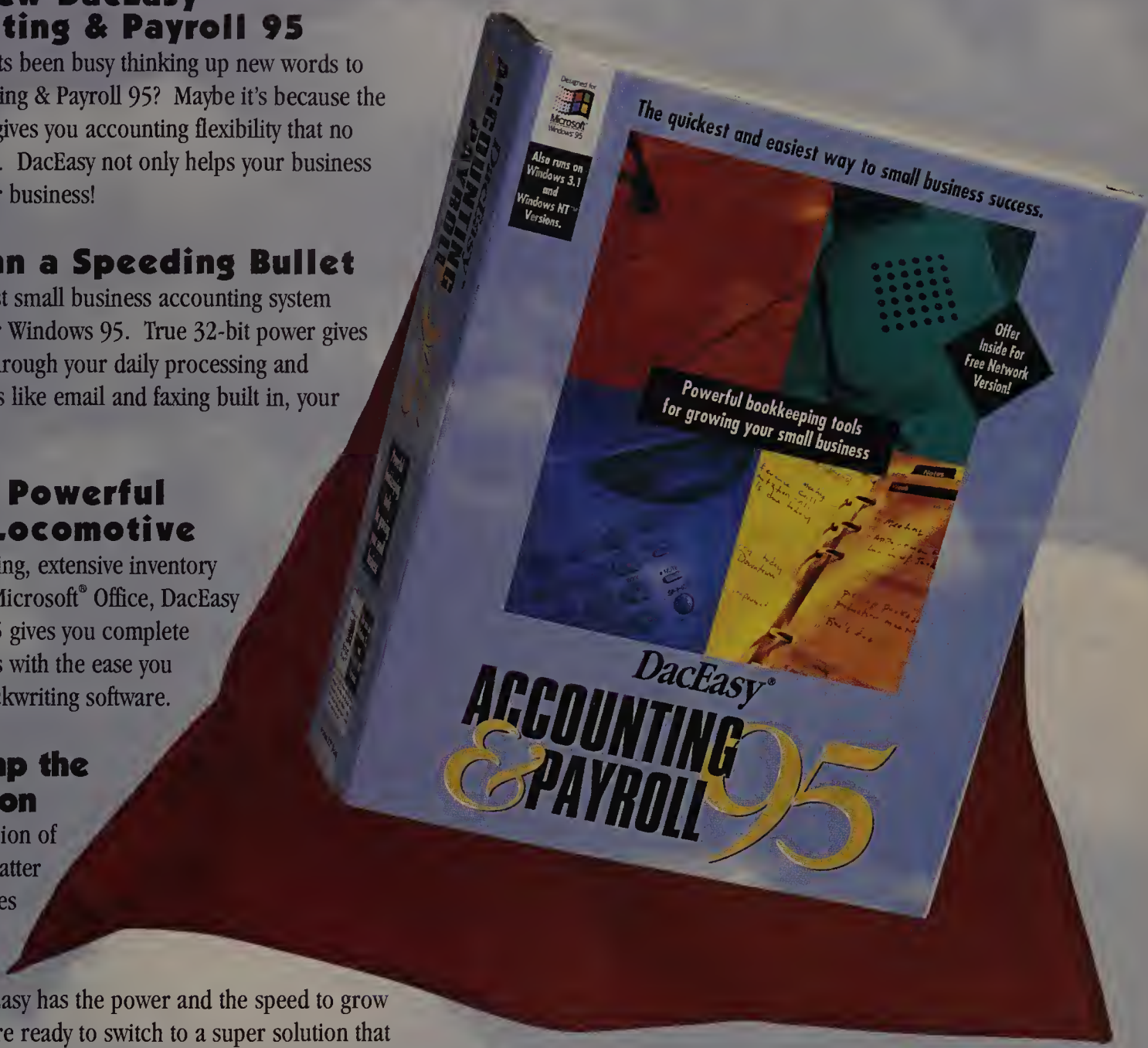
DacEasy has the first small business accounting system designed specifically for Windows 95. True 32-bit power gives you the speed to race through your daily processing and reporting. With features like email and faxing built in, your productivity will soar.

More Powerful Than a Locomotive

With custom reporting, extensive inventory capability and links to Microsoft® Office, DacEasy Accounting & Payroll 95 gives you complete control of your business with the ease you would expect from checkwriting software.

Able to Leap the Competition

No matter what version of Windows you use, no matter what products or services you sell, no matter whether you have one or fifty employees, DacEasy has the power and the speed to grow YOUR business. If you're ready to switch to a super solution that can save the day, try new DacEasy Accounting & Payroll 95.



Super Price
as low as
$75*
after rebate

Switch and Save!

Designed for Windows 95. Also runs on Windows 3.1 and Windows NT.

If you want real 32-bit accounting and you're tired of those programs that don't have enough power or flexibility, switch to DacEasy Accounting & Payroll 95 and get $25. When you switch, you can transfer Peachtree® and Quickbooks® data directly into DacEasy. Plus, you'll receive FREE FORMS for your business. Switch to a better accounting system today and save! But hurry, this limited time offer won't last long - call today.

1-800-DACEASY
1 - 8 0 0 - 3 2 2 - 3 2 7 9

Visit our homepage at www.daceasy.com

Media Code: PCW

Rebate offer expires July 31, 1996. Materials must be postdated no later than that date. To redeem offer, purchase DacEasy Accounting & Payroll 95 from your local reseller and mail the attached packaging sticker along with your receipt and a copy of the manual cover of your Quickbooks, Peachtree, One Write Plus, MYOB or Cashgraf software to DacEasy. Your $25 rebate will be sent to you within 4-6 weeks. Limit one rebate per business. Data transfer compatible with the following software available as of June 1, 1996: Quickbooks 3.0 and above, Peachtree 3.0 and above. © Copyright 1996 DacEasy, Inc. All rights reserved. All product names are trademarks or registered trademarks of their respective corporations. *Average street price is $99 plus the $25 switch rebate.

Circle 77 on reader service card

ular driver replaces comm.drv, Windows' default serial communications driver, and causes the error message when it can't find the modem on the expected port.

If both your new and old modems used a DSI driver, you can run the dsi.exe utility that came with your modem to reconfigure it to the new serial port.

On the other hand, if you're certain your new modem does not use the DSI driver (r0dsicom.drv), you'll have to uninstall it. To do that, first make a backup of the system.ini file in the Windows directory in case anything goes wrong. In File Manager or Program Manager, choose *File•Run*, type **system.ini**, and click *OK* or press **<Enter>**. Under the [boot] heading, look for a line that says 'comm.drv=r0dsicom.drv' and modify it to read **comm.drv=comm.drv**. Next, find the [386Enh] heading, and underneath it look for these three lines:

device= r0dsivcd.386
device= r0dsibuf.386
device= r0dsimgr.386

Delete these lines or (if that makes you nervous) disable them by typing a semicolon to the left of each. Then add two new lines, **device=*vcd** and **device=*combuff**. Save system.ini and restart Windows. The error message should not reoccur.

The above steps assume you'll be using the Windows default communications driver. If, however, your new modem does not use that driver, you may need to run its installation program again. For more information, contact your modem's manufacturer or Digicom Systems at 408/262-1277.

Make a Floppy Garbage Bin

Q How do I set up the Recycle Bin so that it stores stuff that I delete from my floppy disk drives?
Balasingam-Chow Yu Hui, Internet

A Unfortunately, the Recycle Bin doesn't store material from your floppy disks. However, you can make a separate folder that does the job.

First, in My Computer or Explorer find a good place on your hard drive to store these files. Open that parent folder, and in its window right-click an empty area and choose *New•Folder*. Name this new folder **Floppy Garbage Bin** or some other descriptive title. Use the right mouse button to drag the new folder to your desktop, and choose *Create Shortcut(s) Here*. To customize its look, right-click the Shortcut and choose *Properties*. Click the *Shortcut* tab and then click *Change Icon*. Scroll through the available icons and select something appropriate. Click *OK* to close the dialog box, and click *OK* again to close the Properties sheet.

Now when you open a window to a floppy, press **<Shift>** and drag the files you don't want to the new Floppy Garbage Bin Shortcut (or right-drag them and choose *Move Here*). Since this "recycle bin" won't delete items automatically, remember to open it occasionally and purge the files.

Screen Saver Cleanup in Windows for Workgroups

Q I installed a screen saver into Windows for Workgroups 3.11, then deleted the program—but the screen saver's name still appears in the list when I double-click ▶

COMING UP

Next month, *PC World*'s Internet Survival Guide spotlights hardware and software that let you cruise cyberspace without crashing.

Internet Browsers: Windows on the World

As the Internet goes interactive with sound, video, conferencing, and more, which is your best window on the World Wide Web: Netscape Navigator or Microsoft Internet Explorer?

ISDN Adapters: High Speed, High Risk

Analog can slow you down, but ISDN hardware is a far cry from your reliable 28.8 modem. What are the pitfalls and promises of ISDN?

Online Services: Beyond the Net

We check out America Online, CompuServe, and Prodigy. Which works best for e-mail, chat, forums, Web browsing, and your budget?

Also Next Month

- ▶ **The PC World Top 20 Power Desktops, Budget Desktops, and Notebooks, Plus the PC World Top 10 Personal Printers, 15-Inch Monitors, Graphics Boards, and Modems**
- ▶ **Online Rights: What's legal, from copyright to Netiquette**
- ▶ **Online Tips: Working online more efficiently**
- ▶ **Special Report on Workgroup Computing: Top workgroup and enterprise servers**

PC WORLD

The New Casio Digital Camera.
Pretty amazing...no matter how you look at it.

The new Casio QV-10A *plus* Digital Camera might just change the way you take and share your pictures. Because until now, digital cameras were bulky and expensive. The QV-10A *plus* is anything but.

Using it is simple. With its LCD screen you see your pictures instantly. With the touch of a button you can delete images you don't want or display one, four or nine shots at a time in the camera or on a TV. You can even save images on your computer or on videotape.

And with the QV software, e-mailing photos is a snap. It's never been easier to share good news with your friends and family. Using the Adobe PhotoDeluxe™ software that's included, you can customize your photos, even create cards. Now it doesn't take a PhD to use a digital camera. All it takes is the Casio QV-10A *plus*.

And that's just the beginning.

96 Digital Pictures. LCD Color Display. Instant Viewing.

Adobe PhotoDeluxe 1.0

Visit us at http://www.casio-usa.com

Adobe PhotoDeluxe is a trademark of Adobe Systems, Inc.

PopularScience BEST OF WHAT'S NEW AWARDS 1995

CASIO®

capture. create. communicate.

the Desktop icon in the Control Panel. I have looked in the *.ini files and find no reference to the program anywhere. Can you tell me how to delete this screen saver name?
Bob Cruthirds, Internet

A You must delete the most important component of the screen saver, the .scr file. Both Windows 3.*x* and Windows 95 store .scr files in the System directory (or in some cases the Windows directory). Remove the appropriate file with the .scr extension and you'll eliminate its presence in Control Panel's Desktop listing (in Windows 3.*x*) or the Display Properties sheet (in Windows 95).

A Printing Primer for Windows 95

Here are six super tips for quick and efficient printing in Windows 95.

View the queue. Wondering why your file is taking so long to print? Open up the Printers window by choosing *Start • Settings • Printers*. Then double-click on the appropriate printer icon.

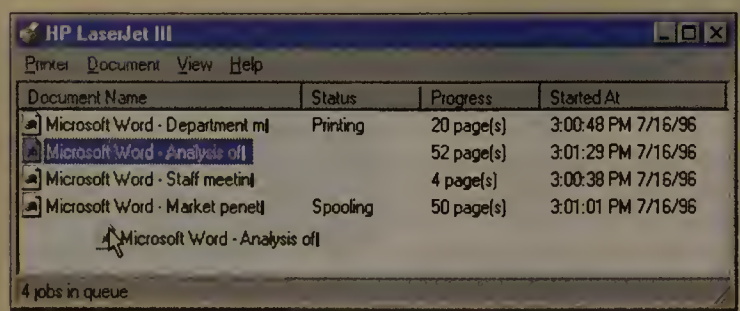
Boss those jobs around. If you enjoy the proper network privileges, you can change the print order of each item in the print queue by selecting it and dragging it up or down. To cancel or pause all print jobs, choose either *Printer • Purge Print Jobs* or *Printer • Pause Printing*, respectively. To cancel or pause one print job, select it and choose either *Document • Cancel Printing* or *Document • Pause Printing*, as appropriate.

Three ways to set it. You adjust a printer's settings through its Properties sheet. In the Printers window, select a printer and choose *File • Properties*, or right-click the printer and choose *Properties*. If you're in the queue window (see the tip above), you can also choose *Printer • Properties*.

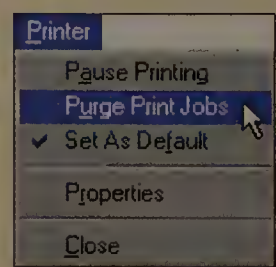
Get your priorities straight. What do you want—faster output or a faster return to your application? You decide: In the Properties sheet, click *Details* and then *Spool Settings*. The first and second options get you back to work fastest but sacrifice hard disk space; the first and third options save a little on disk space. The fourth option (not available for shared printers) uses no disk space and offers faster output—but makes you wait longest to return to work.

Drag and drop and print. You don't have to open a document to print it. Put a Shortcut to a printer in a convenient place (like the Windows desktop) by selecting a printer in the Printers window and then using the right mouse button to drag and drop it where you want. Choose *Create Shortcut(s) Here*, then drop the files you want to print onto the Shortcut.

Send it printing. If your desktop is already too messy or too covered by windows for drag-and-drop printing, move that printer Shortcut to c:\windows\sendto (your path may differ). To print, just click on a file with the right mouse button and choose *Send To* [printer name].



CHANGE THE ORDER OF JOBS in the print queue menu...



...OR DELETE ALL PRINT JOBS from the queue.

DOUG ROSS

Restore the Font Viewer in Windows 95

Q Before I installed Windows 95, I was using a third-party font manager (Font Monster) to manage my TrueType fonts. I chose to delete this program before I installed Windows 95. However, because Windows 95 assumes this program is still available, I've lost my ability to view TrueType fonts. Whenever I double-click on a TrueType font, I get a dialog box asking for the location of the old font manager. How can I reconfigure my system to fix this?
John Fox, Indianapolis

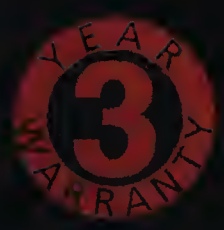
A TrueType's .ttf file extension is associated with your old font utility. All you have to do is change that association to Windows 95's font viewer.

In Explorer or My Computer choose *View • Options*. Click the *File Types* tab. Scroll through the list until you find the TrueType Font file type. Select it and click *Edit*. In the Actions list, select *open* and click *Edit*. In the 'Application used to perform action' box, change the path to read **c:\windows\fontview.exe** (your path may differ) and click *OK*. Then select the *print* action and click *Edit*. Change its application path to **c:\windows\fontview.exe /p** (again, your path may differ). Then click *OK* and close all dialog boxes. Now when you double-click a TrueType font file, you'll see the font viewer and the type sample.

By Scott Dunn

PC WORLD online *The files from this article are available on PC World Online. Scott Dunn is a contributing editor for* PC World *and a principal author of the* PC Bible, 2nd Edition *(Peachpit Press, 1995, 800/283-9444).* Windows *welcomes your questions and pays $50 for published items. See page 14 for contact information.*

DELL DIMENSION
Reliable PCs For High Performance Computing



DELL DIMENSION™ XPS Pro200n
200MHz PENTIUM® PRO PROCESSOR

- Mini Tower Model
- 32MB EDO Memory
- 256KB Internal L2 Cache
- ★ **2.5GB Hard Drive [10.5ms]**
- 17LS Monitor (15.7" v.i.s.)
- ★ **9FX Motion Graphics Accelerator with 2MB VRAM**
- ★ **8X EIDE CD-ROM Drive**
- MS® Office Professional with Bookshelf for Windows® 95 (N.F.I.)
- Microsoft® Windows NT™/30 Days Free Support/MS Mouse
- ★ **3 Year Limited Warranty with 1 Year On-site Service†**
- ★ ***Upgrade to a 2GB SCSI hard drive for only $375 more.***
- ★ ***Upgrade to 1 Year of Windows NT Software Support for only $149 more.***

Business Lease◊: $122/Mo.
Order Code #500276

The New 200MHz Dell Dimension XPS Pro200n

$3299

"...THE PENTIUM PRO LEAVES THE PENTIUM IN THE DUST."

–PC Computing, 3/96

magnified 25x
Notice there's no asterisk to qualify that statement.

No ifs, ands, or buts. Just pure, unbridled speed. Period. That's the Dell Dimension XPS Pro200n. The breathtakingly fast machine that prompted *PC Computing* to reach for oxygen as they remarked, "...it's the fastest Intel-based system we've ever seen—hands down." And in comparing the performance of this Pentium Pro to that of the Pentium, they said, "...exceptional—more than double that of the 133MHz Pentium."

So, if you're a 32-bit power user and want optimal Windows NT performance, give us a call. We'll set you up with what they're calling the ultimate Pentium Pro system. You know, the one with no asterisks.

TO ORDER
800-626-4394
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03148

Dell's featured computer artist is Marco Marinucci of San Francisco, CA.

PC Computing, March 1996 article reprinted with permission of *PC Computing*. ©Ziff-Davis Publishing Company. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite D, Austin, TX 78758. ◊Business leasing arranged by Leasing Group, Inc. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks and the Pentium Pro Processor logo is a trademark of Intel Corporation. MS, Microsoft, Windows and the Windows NT logo are registered trademarks and Windows NT is a trademark of Microsoft Corporation. ©1996 Dell Computer Corporation. All rights reserved.

DATA MANAGEMENT Q&A

Automatically Load Files and Forms

Q I use Access to set up databases for various departments. For most projects, I create a "switchboard" form like the one in the sample databases. I'd like Access to open each person's database and the switchboard automatically when the application is loaded. Can I do this without programming?
Cliff Berg, New York

A Yes and no. If you're using Windows 95, the easiest way to have your program—Access, Approach, or Paradox—automatically open a specific database is to create a Shortcut to it.

Open the Windows 95 Explorer window and bring the name of the database file you want to open into view in the right side of the window. Right-click the file name and choose *Create Shortcut*. When the Shortcut appears in the Explorer window, drag it onto the Start button or onto the desktop. When a user double-clicks the Shortcut, the database program will start and automatically open the database file.

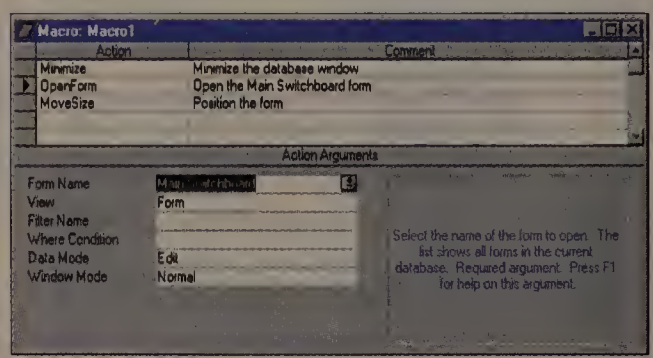


FIGURE 1: AN AUTOEXEC MACRO can tell Access to automatically open a specific form when it starts.

If you're working in Windows 3.*x*, just add the name and path of the file you want to open to the command line that starts Access, Approach, or Paradox. In Program Manager, highlight the program's icon in its program group window and choose *File•Properties*. Click in the Command Line box, press **<End>** to go to the end of the line, press **<Space>**, and add the path to the file. The command line for loading a database file into Access 2.0 might look like this: c:\access\msaccess.exe c:\forecast\payroll.mdb.

The second part of your request, automatically opening a form when a database opens, requires a few simple macro commands in Access and Approach, but not in Paradox. Paradox saves forms and other objects as separate files, so you can load them directly from Windows. I'll describe how to open forms, objects, and views automatically in all three programs.

Access: To open a specific form (or table, module, query, or report) automatically when Access loads, create an AutoExec macro that runs automatically when you open a database.

Go to the Database window, click the *Macros* tab, click *New*, and add an OpenForm action as in **FIGURE 1**. (The optional MoveSize action in the figure opens the form in a fixed position.) When you close the Macro window, save it with the name autoexec.

Approach: To tell Approach to switch to a particular view when a database is opened, create a macro called open. Select *Edit•Macros*, click *New*, and add a View command as in **FIGURE 2**.

Paradox: When you load Paradox, it usually opens any forms or other objects that were open when you last exited the program. It also remembers what working directory you were using. But to make sure Paradox opens to a specific working directory and object, create a Windows 95 Shortcut directly to the object instead of the program, or add the object's path and name to Windows 3.1's Command Line.

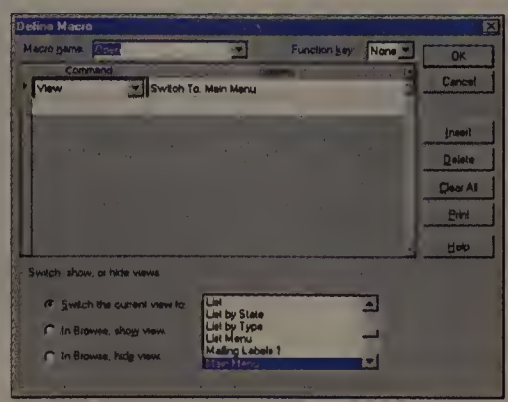


FIGURE 2: AN OPEN MACRO can tell Approach to open a specific form or view when the program starts.

If you already have a Paradox Shortcut on your Win 95 desktop, change its properties so it switches to the correct working directory and opens an object.

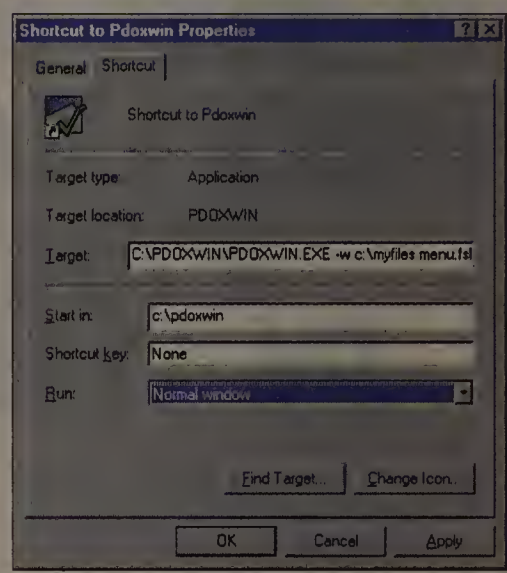


FIGURE 3: PARADOX FORMS AND OBJECTS can be opened directly from the desktop with a Win 95 Shortcut.

Right-click the Shortcut and choose *Properties*. Click the *Shortcut* tab in the Shortcut dialog box, and in the Target box press **<Space>** and add **-w c:\myfiles menu.fsl**, or the names of your working directory and form, as in **FIGURE 3**.

If the Shortcut is on the Start menu, right-click the Taskbar background, choose *Properties*, click the *Start Menu Programs* tab, click *Advanced*, right-click the Paradox Shortcut, and choose *Properties*. Click the *Shortcut* tab, and in the Target box press **<Space>** and add **-w c:\myfiles menu.fsl**, or the names of your working directory and form.

By Celeste Robinson

Celeste Robinson is a contributing editor for PC World *and the coauthor of* Mastering Paradox 7 for Windows 95 *(Sybex, 1996, 800/227-2346).* Data Management *welcomes your questions and pays $50 for published items. See page 14 for contact information.*

Advent and Powered Partners are registered trademarks of International Jensen Incorporated.

Circle 104 on reader service card

ONLINE Q&A

Using Navigator With America Online

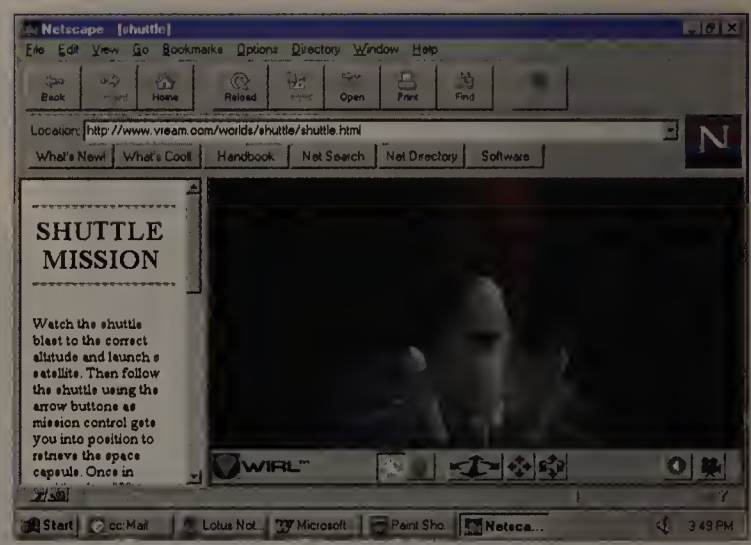
Q I've heard that one can use Netscape Navigator with America Online, avoiding AOL's clunky Web browser. How does this work?
Andre Clark, Trenton

A In theory it's easy. You simply log on to America Online, and instead of heading to the Internet Connection box and clicking AOL's Web browser, you fire up the superior Navigator.

But there are caveats. At this writing AOL doesn't work with the Windows 95 version of Navigator. AOL recommends downloading the 16-bit version from AOL (keyword netscape).

You'll also need to download AOL's 16-bit version of Winsock to work with Navigator (keyword winsock). Finally, you might want to read "Avoid Clashing Winsocks" in April's *Online Q&A* for tips on getting AOL's Winsock to cohabit peacefully with other versions of Winsock you might have installed.

At press time, America Online had signed agreements with Netscape to license Navigator, and with Microsoft to license its Internet Explorer browser (which will be built into the AOL software). Users can download Netscape Navigator and install it themselves. And Navigator 2.0 will be the default browser for America Online's GNN Internet service.



PLAYING 3-D GAMES ON THE WEB is about to become reality with VRML browser plug-ins.

Virtual Reality on the World Wide Web

Q I've been hearing a lot lately about virtual reality coming to the Internet. What is it? And how do I add virtual reality to my Web browser?
Peter Longstan, Baltimore

A Virtual reality on the Internet refers to the ability to see objects on Web pages in three dimensions. You can view the objects from different angles as well as move and interact with them, just as you do in a video game.

Sounds great, doesn't it? But as with most things computer, warring standards plague this emerging technology. As we go to press, Microsoft is pushing its Active VRML (Virtual Reality Markup Language) specifications. And meanwhile, Netscape and Silicon Graphics are lining up developers to support the Moving Worlds standard. I think the Netscape contingent will win.

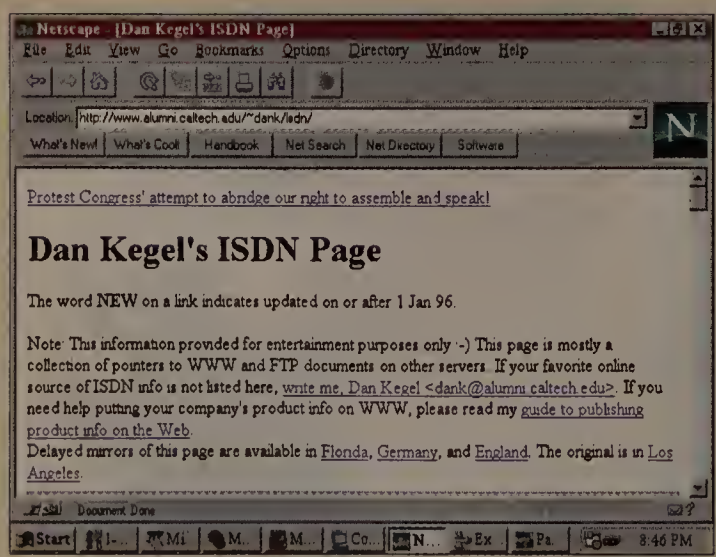
To add VRML ability to Netscape Navigator 2.0, just download one of the many 3-D plug-ins available from the company's Inline Plug-ins page (http://home.netscape.com/comprod/products/navigator/version_2.0/plugins/index.html). These plug-ins pretty much set themselves up, and unlike add-ons of yore, they require no tinkering.

Netscape's own browser plug-in is called Live3D, but my favorite is WIRL from VREAM (see the figure above). It supports sound and gives objects unique visual properties such as elasticity. You can download the beta 1 release of WIRL for free from the company's home page (http://www.vream.com/), or order the $29 commercial version from VREAM.

If you run Internet Explorer, head to the Microsoft VRML Add-In page (http://www.microsoft.com/windows/ie/vrml.htm) to download the company's VRML add-in. All the online services are investigating ways to support VRML, by licensing add-ins or building it into their own browsers.

- **WIRL** $29; VREAM; 312/477-0425; http://www.vream.com/
  Reader service no. 677

Online Project: ISDN, but When?



If you're itching to upgrade to an ISDN line in either your home or your business, head to Dan Kegel's ISDN Page (http://www.alumni.caltech.edu/~dank/isdn/). It offers links to everything on the Net related to these superfast phone lines, even ISDN-related humor.

Getting Fast Connections on the Internet

Q Could you enlighten me on the factors affecting modem throughput on the Internet? What can I do to pinpoint bottlenecks and correct them?
Robert F. Decker, Dutton, Virginia

Trumpcard Breaks the Sound Barrier.

These new multi-function Sound Cards from Ositech will blow you away.

K◆ Ethernet+Sound Q◆ Modem+Sound

Liven up your presentations with CD Quality Digital sound and have your choice of either a 28.8 Kbps Data/Fax/Cellular Modem or Ethernet Adapter in a single, convenient card.

The King and Queen of Diamonds are the latest additions to Ositech's award winning TRUMPCARD family.

Our leading edge multi-function technology gives you simultaneous access to Modem and Sound (with the Q◆) or to Ethernet and Sound (with the K◆), while occupying just one Type II PCMCIA Slot.

Play your Trumpcard.

OSITECH
"The PC Card Innovators"

Toll free 1-800-563-2386
Tel:(519)836-8063 Fax:(519)836-6156
www.ositech.com

ETHERNET+ MODEM+CD ROM | ETHERNET+ SOUND | MODEM+ SOUND | ETHERNET+ MODEM | ETHERNET+ CD ROM | 28.8 MODEM+ DPI™ | ETHERNET with ETHER-BOOST™

And with our special evaluation pricing get a K◆ for $199 or a Q◆ for $299. Call Ositech today to take advantage of this limited time offer (April 1 - May 31/1996).*

Trumpcard, Ace, King, Queen, Jack, Ten, Five, and Four of Diamonds, OPI and ETHER-BOOST are trademarks of Ositech Communications Inc. All other names are trademarks or registered trademarks of their respective companies. *Same conditions and restrictions apply. Contact Ositech for further details.

Circle 167 on reader service card

Speed Up Internet Connections

Modem

1. Make sure a 16550A or 16550AF UART chip is built into your modem or PC.
2. Get the latest software or the latest chip for your modem.
3. Boost your communications software's speed to 115.2 kbps for a 28.8-kbps modem.
4. Download Trumpet Winsock.

Phone

1. Ask your phone company to remove repeaters from your phone line.
2. Ask your phone company if you can bypass multiplexers.

Internet service provider

1. Use the same brand of modem it uses.
2. Find an ISP that connects to the Internet via a T1 or T2 line.
3. Find an ISP that runs off a giant UNIX box, with enough hardware capacity that it won't get overloaded and slow everyone down.

Internet

1. Download large files at off-peak times.
2. Download files from mirror sites geographically closest to you.

A Too bad there's no traffic helicopter hovering over the I-way, broadcasting locations of jam-ups. Many factors affect your speed on the Internet: the pace at which your modem and PC communicate, the condition of the phone line, and your Internet service provider's equipment and setup. Then there's the Net itself and all its whims.

Let's start with your modem. If you're using an internal modem, it should have a 16550A or 16550AF UART chip—not a "faux," "virtual," or "simulated" one, but a real one. If your modem is external, your PC should have this chip built in. (Run the MSD utility found in either your DOS or Windows directory to see if it is.) Low connect rates can also result from an outdated modem. Check with the manufacturer to make sure your modem has the latest software, or the latest chip if the modem accepts hardware upgrades. If you're using a 28.8-kbps modem, boost your communications software's speed to 115.2 kbps.

Some users report that certain Winsocks are slow; for top speed, download Trumpet Winsock from the company's Web site (http://www.trumpet.com.au/wsk/winsock.htm).

Phone lines are another cause of slowdowns. Many suburban and rural users find their local phone line the source of woe. The modem connects at a brisk 28.8-kbps clip in the city but slows to a crawl in the provinces. Test your modem in different locations to pinpoint the problem.

If you suspect that phone lines are the culprit, call a local computer store and ask to test different brands of high-speed modems on your line. Brands vary markedly in their ability to handle suburban and rural phone lines. You should also ask your phone company to remove any *repeaters* from your lines. (Repeaters boost a signal over long distances, sometimes adding distortion.) Find out if your phone calls are being funneled through a *multiplexer*, which allows two or more signals to pass over one line—another cause of modem signal distortion. If so, ask the company whether you can get a direct line into the switching office and bypass the multiplexer. You may have to whine a lot to get these things done.

Next there's your Internet service provider. Many people suggest using the same brand of modem your ISP uses so that data compression between the modems can work at top efficiency. But a lot depends on how your ISP connects to the Net, at what speed, and with what type of hardware. Ideally, the provider should connect directly into the Internet backbone at T1 or T2 speed, and it should have a server powerful enough to handle its callers without becoming overloaded. Of course, if you're connecting via a commercial service such as America Online, CompuServe, or Prodigy, you'll just have to be patient. Connecting to the Internet via these services is like riding a slow bus up a steep hill.

On the Internet itself, increasing traffic means slowdowns at peak times and occasional "brownouts"; in the university town where I live, Internet access creeps during exams. Try downloading large files only in the wee hours of the morning. Overload can also slow down popular shareware servers. If a program you're looking for is available on mirror sites (FTP sites that regularly copy files from a main site), head to the one that's geographically nearest you.

By Judy Heim

Judy Heim is a contributing editor for PC World *and author of* Internet for Cats *(No Starch Press, 1995, 800/420-7240).* Online *welcomes questions and tips and pays $50 for published items.* *See page 14 for contact information.*

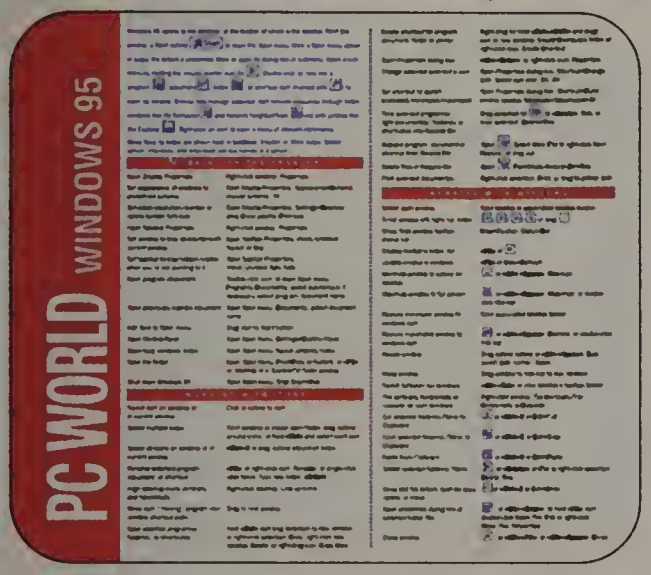
Online Toolbox: Get Cute With FTP

For Windows 95 users, one of the best FTP programs around is a little $30 shareware gem called CuteFTP. It gives you FTP capabilities without making you learn the details of the protocol. Modeled after Windows' File Manager, it's ideal for uploading files to your World Wide Web site. You can download either the 32-bit or 16-bit version from the CuteFTP Web site (http://papa.indstate.edu:8888/CuteFTP/).

FREE GIFT PLUS 58% OFF

☐ **YES. Send me PC WORLD and my FREE mouse pad!**

I'll pay just $24.95 for 12 monthly issues—58% off the annual newsstand rate—plus I'll receive Free, PC WORLD's exclusive Windows 95 mouse pad.



NAME

COMPANY

ADDRESS

CITY/STATE/ZIP

PC WORLD

Please allow 6-8 weeks for delivery of your first issue. Canadian orders please add $20 USD per subscription for postage plus 7% GST (#R124669680). All other countries send $65.97 USD to PC World, P.O. Box 55029, Boulder CO 80322-5029. Printed in the USA. Savings based on newsstand rate of $59.40.

4MJS3

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1262 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD

Subscription Department
P.O. Box 51833
Boulder, Colorado 80323-1833

Now

You Can Bat

Those Baby Blues

All Over

The Internet.

Introducing Connectix Color QuickCam™, the camera and software that lets you use your computer in fun ways at home, business and on the net. Send personalized cards. Add images to business reports. Videoconference with additional software. Spiff up your web site. Get Color QuickCam for under $200*. Just plug it in, install the software and start taking brilliant color pictures and video on your computer.

Connectix

1-800-571-7558 or www.connectix.com

*Estimated retail price after $30 rebate

Circle 86 on reader service card

Now You Can With Color QuickCam

For Windows and Mac platforms. Available wherever computer products are sold.

© 1996 Connectix Corporation. 2655 Campus Drive, San Mateo, CA 94403 USA • 415-571-5100 • FAX: 415-571-5195 • EMAIL: info@connectix.com. QuickCam is a trademark of Connectix Corporation. All other trademarks are the property of their respective owners.

HARDWARE Q&A

Getting the Best PC Price/Performance

Q I recently purchased a Pentium-166 system. To say I'm disappointed with its performance is an understatement. How much faster should my P-166 be than a P-133 or a P-100?
Steve Smith,
State College, Pennsylvania

A Now there's a loaded question! All things but the CPU being equal, you can expect a real-world performance difference of around 20 percent between a Pentium-100 and a Pentium-166 system. That's a far cry from the two-thirds difference suggested by the numbers, isn't it?

Your question exposes the misleading way in which systems are marketed—by the internal processing speed of the CPU, normally featured in the model number, as in "P133." In addition to the CPU's internal processing speed, another speed has a big impact on your computer's performance: the external bus speed, also called the motherboard speed; the bus lopes along at 50, 60, or 66 MHz.

For fast processing, all current Pentiums chips multiply the bus speed: A Pentium-133, for example, doubles its 66-MHz bus speed, just like the DX2-66 clock doubler of yore doubled a 33-MHz bus speed. However, in both cases, only the instructions and data in the CPU's cache are processed at the faster internal processing speed. When the chip refills the cache or writes to memory, it bumps down to bus speed or slower. Instead of doubling system performance, running the CPU at double the bus speed gives you between 30 and 70 percent swifter performance.

Pentium chips don't just double or triple the clock, as 486DX2s and DX4s did; they may also multiply the bus speed by a fraction. This creates baby steps on the performance ladder—steps for which system vendors charge a premium (see **FIGURE 1**). For example, the Pentium-166 multiplies 66 MHz by 2.5, resulting in a barely noticeable performance advantage over the clock-doubling P-133, even though the system price difference hovers around $400 at this writing. Take an identically configured P-133 and P-150, and price aside, I defy you to tell the difference. The latter's slower 60-MHz bus speed makes its performance virtually indistinguishable from that of the former.

You always pay a premium for the best performance, but with Pentium-class systems, that premium buys you less. So where's the sweet spot? That changes from month to month, but there are three rules that won't change anytime soon; they apply also to systems with Pentium clones.

Let's see how you did with your Pentium-166:

• *Buy a computer with a 66-MHz bus.* Score one for you: Your Pentium-166, like Pentium-100s and -133s, has a 66-MHz bus. Pentium-90s, -120s, and -150s all have 60-MHz buses. That 6-MHz deficit also causes the PCI bus to run at 30 MHz instead of its optimum 33 MHz, which is another reason Pentium-150s average only a few points faster than P-133s. The slow 50-MHz buses in Pentium-75 systems, now obsolete, actually caused those systems to run slower on average than Pentium-66s.

• *Look for CPUs that multiply the bus speed by whole numbers.* You lost here. Your CPU multiplies the bus speed by 2.5, so the synchronization between internal CPU processing and the bus isn't as clean as with whole-number multipliers—one reason the P-166s we've tested average only 8 percent faster than P-133s, which multiply by 2. By the same token, the P-133s average a solid 15 percent faster than P-100s, which multiply by a wimpy 1.5. Pentium-133s are the best buys at this writing: For example, Dell was selling a P-133 for only $20 more than a P-100 in an identical configuration.

• *Buy one or two steps back from the cutting edge.* You get half a point here. Although you bought the fastest Pentium available and paid for the privilege, you avoided buying a Pentium Pro, which would have been much more expensive and not necessarily faster (see "From 586 to Pentium Pro: Choosing Your Dream PC," February). By the time you read this, Pentium-200 PCs may be shipping (see "Pen-

Pentium Performance From Top to Bottom

CPU class (internal processing speed)	System performance advantage over previous class	System performance advantage over Pentium-60	System bus speed	CPU speed as multiple of bus speed
Pentium-166	2%	59%	66 MHz	2.5
Pentium-150	6%	56%	60 MHz	2.5
Pentium-133	5%	48%	66 MHz	2
Pentium-120	10%	41%	60 MHz	2
Pentium-100	6%	14%	66 MHz	1.5
Pentium-90	8%	21%	60 MHz	1.5
Pentium-75	−1%	12%	50 MHz	1.5
Pentium-66	14%	14%	66 MHz	1
Pentium-60	–	–	60 MHz	1

FIGURE 1: DON'T PAY TOO MUCH FOR A SMALL PERFORMANCE BOOST when you buy a PC, since the rungs are close together on the ladder of Pentium systems. These figures are rough averages based on benchmark results for dozens of systems tested with 16MB of memory.

Now

"Hey dad, how's it going?"

Be Half Way

"Just checking in. What's new at home?"

Around The World

"Oh not much. Just this!"

And Still See

(gasp!)

Eye To Eye.

"Gottcha! It's fake."

Finally, full-screen, color video conversations are a reality. Connectix VideoPhone™ is the easy, fun and very inexpensive way to keep in touch with family and friends or even attend meetings at work. The VideoPhone software alone is about $55; bundled with our Color QuickCam™ it costs about $250; bundled with our B&W QuickCam about $150.

You'll be amazed! Try VideoPhone *free* by downloading a viewer from our web site. For information, call **1.800.571.7558** or visit **www.connectix.com.**

Connectix

Circle 29 on reader service card

Show and Tell With Connectix VideoPhone.

At computer stores everywhere. For PC and Mac over ISDN, LANs or the Net, PC with 28.8 modem.

Connectix Corporation 2655 Campus Drive San Mateo, CA 94403 USA • (415) 571 5100 • Fax (415) 571 5195 • E-mail info@connectix.com Connectix VideoPhone is a trademark of Connectix Corp. All other trademarks are the property of their respective owners.

tium-200: Winner by a Hair," *Top of the News*). These systems and increasing competition from Pentium clones will drive down the cost of P-166s.

Anyone shopping for a fast system should remember that the CPU isn't everything. Make sure you have at least 16MB of RAM if you plan to run Windows 95. Opt for 16MB of EDO RAM, and you'll get a slight speed advantage over ordinary RAM. Most important, make sure your system has at least 256K of secondary cache (pipeline-burst or SyncBurst cache is best). By the time you read this, you should be able to buy a Pentium system that uses Intel's new 430HX chip set (the group of satellite chips on the motherboard that supports the CPU). Systems with the 430HX chip set will likely set Pentium performance records, running up to 10 percent faster than systems with today's Triton chip set.

A fast hard disk can also increase performance, although differences among contemporary makes and models are generally slight (see "A Gigabyte Drive for $199?" in May). You'll also find that current graphics cards deliver very similar performance in most applications; *PC World*'s Top 10 Graphics Boards lists some of the fastest.

The bottom line is the actual performance. With such little difference in the average performance of each Pentium class, it's easy to find individual systems that perform like systems in other classes. For example, we've tested Pentium-166s that were slower than Pentium-133s because of outdated hard disks, quirky BIOSes, and other peculiarities. If you're looking for the most PC for your money, keep an eye on *PC World*'s Top 20 charts, where each PC receives a performance rating based on tests with real applications.

A New Twist for Old Hard Disks

Q In your March 1996 column, you suggested unsticking a hard disk by rapping it with the butt of a screwdriver ["Hard Disk CPR"]. I suggest a more reliable and much safer method.

The problem is not likely to be the head sticking to the platter, but rather the drive shaft sticking to its bearings. The bearings are lubricated, and the lubricant can become sticky over time, until the drive motor doesn't generate enough starting torque to overcome this adhesion. The problem is referred to as "stiction" and was common with early 3½-inch disk drives.

The cure is to remove the drive from the case and grasp it across the broad surface, with your wrist axis perpendicular to the drive (in the same axis as the drive's spindle). Then twist your wrist quickly several times (see the figure below). The mass of the platter will resist the twist, usually enough to free the shaft. This method is safer than tapping the drive because it does not force the head against the platter. And it's more reliable because it attacks the real problem—the adhesion of the drive shaft to the bearings.

Robert Krawitz, Internet

A Thanks for the great description! What I suggested came from technical support for a particular hard drive, but your advice is well taken, and should be tried before resorting to my more violent method.

Sweeping Disk Manager Under Windows 95

Q I read with interest the item in February's column about removing Disk Manager, the utility that remaps your hard disk ["Giving Disk Manager the Boot"]. After following your instructions and entering fdisk /mbr, I ran into trouble with Windows 95. I called Microsoft, and they said that once you rewrite the master boot record, as the command you listed does, you have to reinstall Windows 95.

Tom Norwood, Chandler, Arizona

A You're right and I apologize—I neglected to give specific instructions for Windows 95.

Let's review: First, you back up your hard disk, because all its data will be destroyed. To get rid of Disk Manager, you need to copy fdisk.exe to a boot floppy, boot from drive A:, and enter **fdisk /mbr**, which overwrites the master boot record on your hard disk. But if you're a Windows 95 user, you need to make sure you have a Windows 95 boot disk in your A: drive, not a DOS boot disk. Then you run fdisk and partition your hard disk as desired.

If you use a DOS boot disk, as you did, when you restore your data from your backup to the hard disk, all your data will be intact—but you'll boot to DOS. As you discovered, the only way to get your system to boot from Windows 95 again is to reinstall Windows 95 from scratch.

By Eric Knorr

Eric Knorr is a contributing editor for PC World *and editor and principal author of* The PC Bible *(Peachpit Press, 1995, 800/283-9444).* Hardware *welcomes your questions and pays $50 for published items. See page 14 for contact information.*

Unsticking a Frozen Hard Drive

IF YOUR HARD DISK WON'T BOOT but your drive light stays lit, the problem may be a frozen drive spindle. Rather than whacking the drive with a screwdriver, try giving it a hard twist of the wrist to free it up.

1 Take out the drive and grasp it with your hand flat and your wrist perpendicular to the drive, on the same axis as the spindle.

2 Rotate the drive abruptly back and forth a few times, as if turning a dial.

THE NEW PD STANDARD IS HERE

Windows 95 Compatible

ONE SCSI DRIVE
BOTH 4X CD-ROM AND REWRITABLE OPTICAL

It's the Phasewriter Dual™ with PD technology from Toray and it transcends existing standards with more flexibility than any other optical drive. Phasewriter Dual reads CD-ROMs at quad speed and reads or writes to optical disks at a blistering .87 MBytes/second transfer rate. Just drop a CD-ROM into our new Phasewriter Dual or switch to a 650 MByte single-sided rewritable disk for portable data exchange. The Phasewriter Dual is setting new standards with higher capacity and CD-ROM compatibility at a much lower cost.

And it's Fast, Fast, Fast!
Plug this drive into any platform hardware or network and you're ready to go.

The single front loading tray holds CD-ROMs or Toray's CD-size rewritable optical (PD)disks. Because it is a SCSI drive, the software identifies and mounts either media automatically.

For information on drives, media or the retailer nearest you, call **1-800-TORAY-PD**.

PHASEWRITER DUAL™

by

'TORAY'

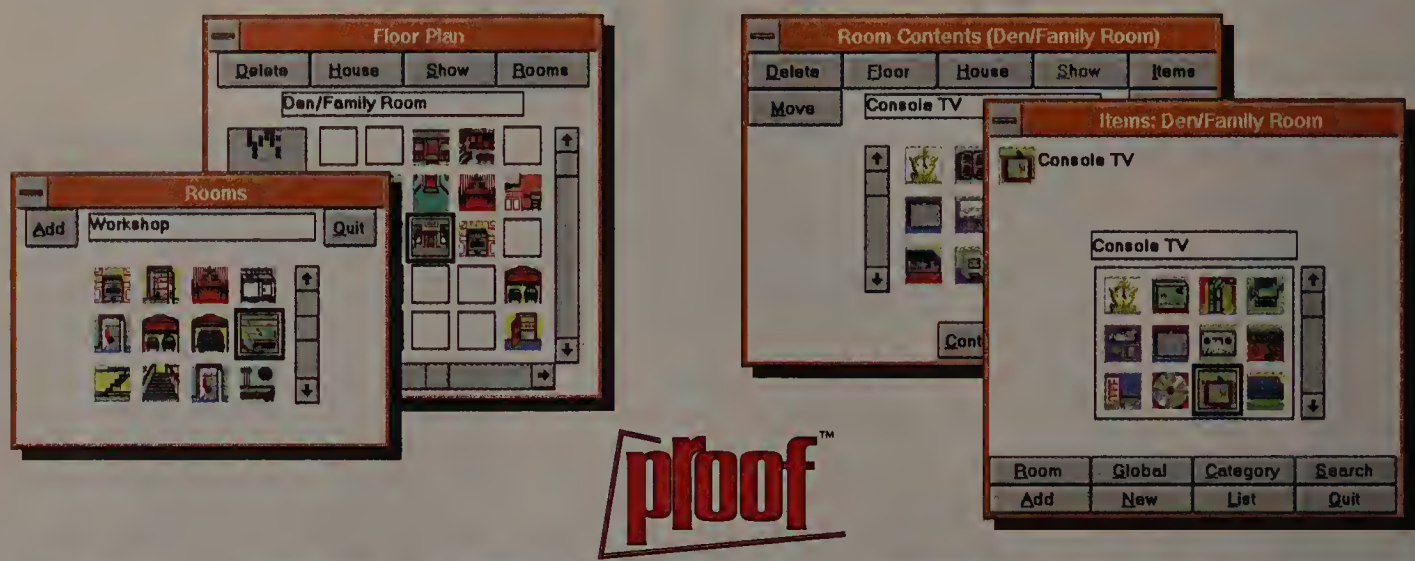
email: info@toray.com Internet: http://www.toray.com

©1995 Toray Marketing & Sales (America), Inc.

Free

Personal Inventory Manager™

~~$99.99~~ FREE! (While supplies last!)



proof™

Will you know what you had when it's gone? Could you prove it?

Finally, Personal Inventory Software That Is Quick, Easy, And Fun.

Armed only with a mouse and Fusion Software's **Proof**, you can capture the contents of your home or office, and it's quick, easy, and fun. Now you can have the peace of mind you have always wanted, knowing that you are properly insured. And filing an insurance claim with **Proof** is as easy as clicking a mouse button.
What used to be a boring, tedious, text operation with a database, word processor, or spreadsheet, is now fun, easy, and graphical with **Proof**. If you can drag and drop an icon, you can create a list of the contents of your home or office. It's that simple!

Circle 100 on reader service card

Proof does it all!

- Provides a complete record
- Contents selection, sorting, and reporting.
- Prints claim forms
- Settlement tracking

A Personal Inventory Manager That Has Expert Insurance Advice.

Over 600 colorful icons to help you identify rooms and items in your home or office. You may enter as little or as much information about each item as desired. You can even assign an heir. **Proof** will help you by highlighting insurance company requirements.

fusion Software

To prove how important we think your records are we are giving away thousands of copies. But you have to act fast. Order your FREE version of our $99.99 Proof now.*

All mail-in orders postmarked on or before Oct. 1, 1996 are GUARANTEED to ship for the shipping and handling charge only.

ORDER TODAY!

800-856-8566

713-465-6363 (Houston)
713-465-9749 (fax)

Mail: **Fusion Software**
9337-B Katy Frwy, Ste P607
Houston, TX 77024
TX residents add 8.25% sales tax

MICROSOFT® WINDOWS™ COMPATIBLE

***There is a $9.95 nonrefundable shipping and handling charge.** Have your Amex, Mastercard, Visa or Discover card ready. One copy per household. Canada add $3, other countries add $22. IBM PC or compatible, running Windows 3.1, VGA or better, mouse or compatible device, and minimum 4MB ram required. Fusion Software reserves the right to end this offer at any time. © Fusion Software,Inc, Houston, TX 77024. Proof is a trademark of Fusion Software. Windows is a trademark of Microsoft® Corporation.

P607

PC WORLD MARKETPLACE

For Advertising Sales

Eastern & Central Regions
(203) 857-5101

Pacific & Mountain Regions
(203) 857-5102

UNIVERSAL PC DIAGNOSTIC TOOL KIT

Micro-Scope is a universal PC diagnostic that runs a proprietary O/S which eliminates DOS limitations and inaccuracies. Ver.5.0 adds 125 enhancements and includes: IDE low-level format, accurate IRQ conflict display, cache memory test, 2 meg video memory test, data recovery capabilities, virus capabilities, and more!

Post-Probe is a universal P.O.S.T. reader card for the non-bootable PC. Post-Probe includes: MCA adapter, tri-state logic probe, 13 LED pre-post test, 7 segment post code display, and a manual with a full explanation of the manufacturer post codes down to the device or chip failure.

Micro 2000

1100 E. Broadway #301
Glendale, CA 91205
TEL: (800) 864-8008
FAX: (818) 547-0397

CIRCLE 457 ON READER SERVICE CARD

MANAGERS READ ONLY PC WORLD.

Well, 684,000 of them read only PC WORLD. You can t reach them through any other computer magazine. No kidding.

Call for Details (203) 857-5101 or -5102

The Portable Solution

Videx manufactures portable, durable, and programmable data collectors for applications such as:

- inventory
- warehousing
- security
- asset tracking
- field inspections

and virtually any application requiring data collection at the work site.

Cast-metal cases protect the products and allow them to work reliably in harsh environments. Each is designed to fit in the palm of your hand.

Call for a free information kit today!

Videx
1105 N.E. Circle Blvd., Corvallis, OR 97330
541-758-0521 • Fax 541-752-5285

Videx, TimeWand, DuraWand, TouchProbe, and OmniWand are registered trademarks of Videx, Inc. GCO582

CIRCLE 480 ON READER SERVICE CARD

COMPUTER CHECKS

BUY DESIGNER DIRECT FOR LOWEST PRICES!

Laser/Inkjet

Continuous Checks and Check Savers Also Available.

As Low as $29.95

CALL: 1-800-239-4087

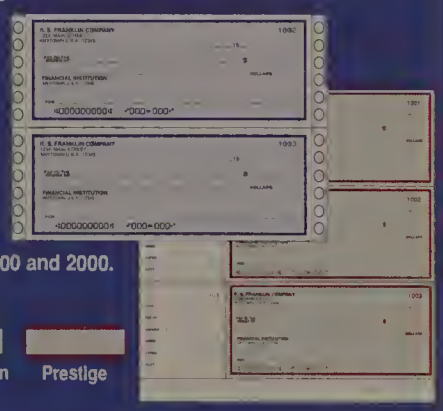
FAX ORDERS: 1-800-774-1118
(PLEASE CALL FOR A FAX ORDER FORM)
MC, VISA & AMERICAN EXPRESS ACCEPTED

Internet: http://www.hotnew.com/checks/
E-Mail: info@checks.hotnew.com

- ✔ QUICKEN
- ✔ SIMPLY MONEY
- ✔ MICROSOFT MONEY
- ✔ MANY MORE

Laser and Continuous Feed Checks available in:

- Business Size
- Business Size with Voucher
- Wallet Size



Available in Quantities of 250, 500, 1000 and 2000.
Choose From 4 Stylish Colors!

Classic Blue | Tan | Classic Green | Prestige

Designer CHECKS
P.O. Box 13387 • Birmingham • AL 35202

PO7P04D6 • P.C. WORLD

CIRCLE 474 ON READER SERVICE CARD

Control PC, Macintosh, and Sun Computers from 1 Console!

- Supports any mixture of PC/Macintosh computers and Sun workstations - up to 4 in all
- Convenient desktop size
- Any platform's peripherals work with any type of computer in the system
- Full multimedia capabilities; keyboard, mouse, video, microphone, speakers, and serial support available
- Multiple users can access different computers simultaneously

AUTOBOOT COMMANDER 1xP™

PC is a registered trademark of International Business Machines Corporation. Macintosh is a registered trademark of Apple Computer, Inc. Sun is a trademark of Sun Microsystems. The Inc. 500 logo is a registered trademark of Goldhirsch Group. Cybex, Commander, AutoBoot, and 1xP are trademarks of Cybex Computer Products Corporation.

Cybex Computer Products Corporation
4912 Research Drive Huntsville AL 35805 USA
1-800-932-9239 (205) 430-4030 fax
http://www.cybex.com

An Inc. 500 Company

Visit our booth at PC Expo, New York, June 18-20, Booth #4934 Networks UK, Birmingham UK, June 25-27, Booth #E82 COMDEX CN, Toronto, July 10-12, Booth #164

CYBEX™ COMPUTER PRODUCTS CORPORATION

CIRCLE S16 ON READER SERVICE CARD

"The #1 PC Desk."

1.800.688.2446

agio DESIGNS™ Fax:503.690.1423 support@agio-designs.com

CIRCLE 443 ON READER SERVICE CARD

TALK IS CHEAP.

The Affordable Prelude™ Computer Telephony Platform

Tap into the fast-growing computer telephony market with Rhetorex platforms. Software developer's kits, apps gens, Visual Basic toolkits and TAPI compliance available.

RHETOREX

Rhetorex, Inc., 151 Albright Way, Los Gatos, CA 95030
Tel.: (408) 370-0881; Fax (408) 370-1171; Internet: rhet.info@octel.com

All trademarks identified by the ™ are trademarks of Rhetorex, Inc. All other trademarks belong to their respective owners. © Rhetorex, Inc. All rights reserved.

CIRCLE 475 ON READER SERVICE CARD

Can Your Desktop Face The Music?

The Edirol Buyer's Guide has everything you need to unleash the musical genius in you and your PC or Mac.

Transform your computer into a music studio, complete with sound cards, speaker systems, keyboards, MIDI synthesizers, and the latest software for helping you create and print your own music.

Discover music solutions for school and home education. Plus, choose from a library of thousands of MIDI songs on disk.

And it's yours for less than a song – it's FREE!

New Software Releases.
Full Upgrade Kits Available.
Competitive Pricing.
Direct Shipping & 30 Day Money Back Guarantee.

FOR FREE BUYER'S GUIDE CALL:
1-800-380-2580

EDIROL
Edirol Corp.
1201 Fourth Ave. South, 3rd Floor, Seattle, WA 98134

CIRCLE 489 ON READER SERVICE CARD

RECORD CD'S

NOW YOU CAN AFFORD ONE TOO!

YAMAHA 4X MULTIMEDIA BUNDLE $1299

SONY Award Winning 2X $799

Now with: INCAT EZCD MULTIPLATFORM MULTIMEDIA
For Win 95, NT, 3.11
Supports all major formats
Full Win 95 GUI

Or with: COREL CD CREATOR 2
Extensive Disc Wizard
Simple CD Duplication
32-bit Sound Editor

JAZ/CD-R DUO EXTREME $1499

CD-R BLANKS $7.99

SOFTWARE

RED ROASTER PC SW for writing "Red-Book" Audio CDs	$599
COREL CREATOR 2 Easy-to-use Premastering SW	$CALL
INCAT EZ CD MM Powerful Multimedia Premastering	$CALL
GEAR MM Multi-Platform Multimedia Premastering SW	$199
ALCHEMY GOLD Network Index/Retrieval SW	$CALL
DIRECTOR 5.0 Multimedia title developement SW	$CALL

2.6GB OPTICAL DRIVE
• Reads/Writes 1.3 & 650 Disks
• 60% Faster than 1.3GB
• Only $1699 External

OPTICAL

128MB	$12.99
230MB	$17.99
650MB Optical	$39.99
1.3GB Optical	$49.99
2.6GB Optical	$79.99

SYQUEST JAZ & ZIP

44MB	$33 - 105MB $35
88MB	$37 - 270MB $56
200MB	$70
JAZ 1GB	$115
ZIP 100MB	$16.99

CD LABELER
Complete Kit
• Software for Mac or PC
• 100 Gold & white labels
• Alignment Device
Only $79

iomega JAZ
1GB Removable HD
Includes 1 Cartridge
599

COLORSCRIBE
CD Blank Printer
• 360 DPI Resolution
• Under a minute per CD
• Brilliant Color
$2995

MEDIASTORE
http://www.mediastore.com
800-555-5551
ph. 714-974-5551 Fax. 714-279-1690
VISA · MasterCard · AMERICAN EXPRESS · P.O.s

CIRCLE 466 ON READER SERVICE CARD

STOP COMPUTER THEFT!

IN THE OFFICE — ON THE ROAD

- Secure computer or notebook to desk, table, etc.
- Protect data
- Lifetime warranty

Kablit™ II - List $34.95

Fixed Location

Kablit™ T-Lock - List $39.95

Any Location

Quick And Easy To Install
Available For Macintosh Too

Padlock Security Provided by Master® Lock

TOUGH UNDER FIRE

Secure-It

Order now — Call 800-451-7592...
18 Maple Court, East Langmeadow, MA 01028, USA phone 413-525-7039
EMAIL: secure-it@owls.com INTERNET: http://owls.com/secure-it/index.html

The particular Master® Lock Trademarks used are trademarks of the Master® Lock Company and are used by Secure-It, Inc. under license.

CIRCLE 433 ON READER SERVICE CARD

SVGA Splitters

HRT
HALL RESEARCH TECHNOLOGIES
800-959-6439
714-641-6607 fax: -6698
1506 Brookhollow Dr.,
Santa Ana, CA 92705

Celebrating Our 12th year!

Toll-Free Support
One Year Warranty
Quantity Discounts

- Display your PC's screen on many monitors simultaneously
- Perfect for demos, training and remote monitoring
- Proven wideband amplifier assures bright and crisp image - GUARANTEED!
- Automatically access one PC from two keyboards with ease
- Quality monitor and keyboard extension cables available to 500 feet
- Exclusive video switches, multiplexers and other unique products

Custom Fast 20 SCSI Tools

SCSIVue™ Active Terminator

Optional Remote Display

Benefits:
• Improves SCSI Bus Performance
• Less Errors; More Reliable Data Transfer
• Diagnoses Problems • Analyzes Signal Quality
Features:
• Active Regulation • *Fast 50 & Fast Wide 68*
• Status Indicators • Gold Contacts

From: $59

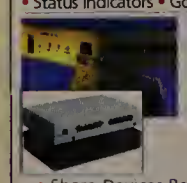
SCSIVue™ Gold Diagnostic Cables

Benefits:
• No Loss Of Important Data
• Faster Performance
• Test Cable Integrity
Features:
• Diagnostic Indicators • Large Ferrite Filters
• Triple Shielding (Unique Design)
• Double Gold 20u" Plated Connectors
• Extra Heavy 26 Gauge Wire • 40 Styles in Stock

From: $39

SCSI 2+3 COMPATIBLE

SCSIVue™ 2-1 Active SCSI Switch



Benefits:
• Share Devices Between 2 Computers
• Up to 14 Devices to 1 Computer
Features:
• 2-1 Active Digital Switch/Repeater
• Regenerates SCSI Signal for Long Runs

SCSIVue™ Custom Teflon Internal Cables

Benefits:
• Less Errors, Ultimate Performance
• Silver Wire Improves Signal Quality
Features:
• Perfect 90 Ohm Impedance Match • Custom in 1 Day
• Triple Pronged Connector With Gold contacts Silver Wire

From: $39

Granite D•I•G•I•T•A•L
http://www.scsi.com
The SCSI Solution Company
Ph: 510-471-6442 Fax 510-471-6267
3101 Whipple Rd. Union City, CA 94587

CIRCLE 454 ON READER SERVICE CARD

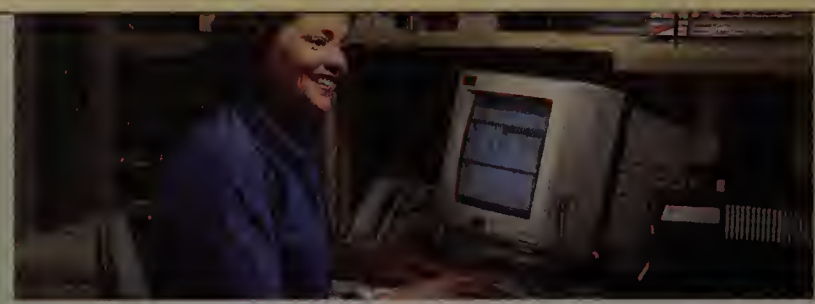
Beacon™ 2500

$6,499

500 Lumens!

The new standard for brightness and value in conference room LCD projectors!

- True 500 ANSI Lumens!
- Auditorium or full room light use!
- Remote power Zoom & Focus
- 2 PC inputs, 2 video, 4 audio
- Biggest, brightest image anywhere!



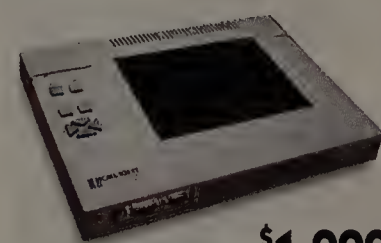
"Boxlight sells more electronic projection systems, to more people than anyone. Call to find out why."

ColorShow™ 2000+

ONLY $3,999

The first, and still the only TFT active-matrix projector you can buy for under $4,000!

- Sleek, compact & stylish design
- Less than 20 lbs. travel weight
- Includes free remote control



Limited Time! $1,999

ProColor™ 1301

TFT Active Matrix Color for under $2,000

- Save $1,000 on our Best Seller!
- Lightweight, reliable, rugged design
- Mac or PC, optional video & audio
- Easy-menu, zoom, freeze, pointer

As the most trusted name in Presentation Electronics™, we offer:

- Dialog with knowledgeable people who really help
- More than 50 models to choose from, available now
- Overnight shipping to multiple world-wide locations
- Money-back 30-day guarantee
- Free lifetime tech support

Monday through Friday, 6am — 5pm, Pacific Time. Purchase orders accepted (some restrictions). Leasing and rental options available. Prices subject to change. Quantities may be limited to stock on hand.

http://www.boxlight.com

Call BOXLIGHT today 1-800-762-5757

BOXLIGHT™ DIRECT

Government: (800) 497-4009
Resellers: (800) 736-6956
International: (360) 779-7901

Rental: (800) 736-6954
Fax: (360) 779-3299
Education: (800) 689-6676

PR2

The Inc. 500 logo is a registered trademark of Goldhirsh Group, Inc.

CIRCLE 511 ON READER SERVICE CARD

We Want to Send You a

FREE!

268 PAGE CATALOG OF DISCOUNT COMPUTER SUPPLIES & ACCESSORIES

Plus!

We will add you to our mailing list for one year on a trial basis – in which time you will receive 4 catalogs from the most unique company in our industry.

LYREN COMPUTER SYSTEMS

5545 Bridgewood, Sterling Heights, MI 48310

CALL US TOLL-FREE (800) 493-5777 *or* Fax (810) 268-8899

Simply utilize the reader service number below – or call, write or fax us for your free catalog.

CIRCLE 491 ON READER SERVICE CARD

PC WORLD'S PC-proficient managers are involved throughout the purchase process.

- 81% determine the need for products & their features
- 85% suggest, evaluate or recommend specific brand models
- 55% make the final buying decision

Call Now for More Information (203) 857-5101 or -5102

FREE Computer Products and Electronic Components Catalog!

You can depend on Jameco for...

PRODUCT Over 5,000 items from silicon rectifiers to CD-ROMs. Over 250 exciting new products!

AVAILABILITY Our 99.7% product availability ratio virtually eliminates backorders!

DELIVERY Same-day shipping!

VALUE Everyday low prices!

CONVENIENCE Toll-free phone, fax, e-mail, BBS, standard mail and will-call ordering options.

RELIABILITY 30-day money-back guarantee and 23 years of experience assure confidence.

Please mention VIP# PW6

JAMECO® ELECTRONIC COMPONENTS COMPUTER PRODUCTS

1355 Shoreway Rd. ▪ Belmont, CA 94002
800-831-4242 ▪ 415-592-8097 ▪ Fax 800-237-6948
http://www.jameco.com ▪ e-mail: info@jameco.com

CIRCLE 420 ON READER SERVICE CARD

TOTAL INTERNET

$15.95*

MONTHLY

The lowest flat monthly national Internet rate

Macintosh™ and Windows™ 3.x/95 compatibility

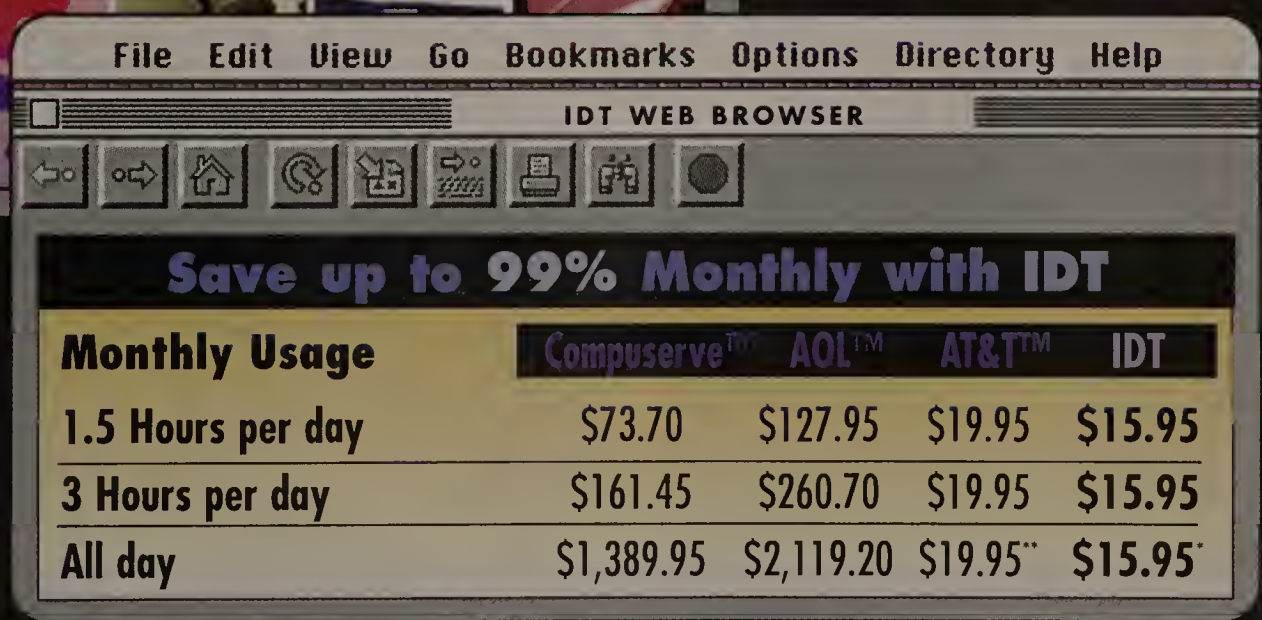
No per minute charges

Unlimited tech support 24 hours a day

Internet access available in most U.S. cities

UNLIMITED! UNCENSORED!

FULLY GRAPHIC! FREE Netscape™



Save up to 99% Monthly with IDT

Monthly Usage	Compuserve™	AOL™	AT&T™	IDT
1.5 Hours per day	$73.70	$127.95	$19.95	$15.95
3 Hours per day	$161.45	$260.70	$19.95	$15.95
All day	$1,389.95	$2,119.20	$19.95**	$15.95*

*With IDT phone service ($19.95 without)
With AT&T phone service ($24.95 without)
IDT phone rates are up to 50% below AT&T

IDT is a trademark of IDT Corp. All other trademarks are the property of their respective owners.

For 56K or T1 please call (800) 573-9IDT

PCW796

IDT Internet

TO SIGN UP/GET INFORMATION CALL ANYTIME:

1-800-245-8000

CIRCLE 424 ON READER SERVICE CARD

www.imagers.com

indigo™

print only what you need!

DIGITAL OFFSET COLOR™

PC/Mac Files
Go Direct
To The Digital Press

Short-Run 4-Color Offset Printing
Brochures, Press Kits, Product Literature,
Business Cards, Newsletters, Phone Cards
- Send files - FTP • ISDN • BBS
- 24-48 hour on-demand service
- Expert Customer Support Team

Kodak PHOTO CD SERVICE PROVIDER

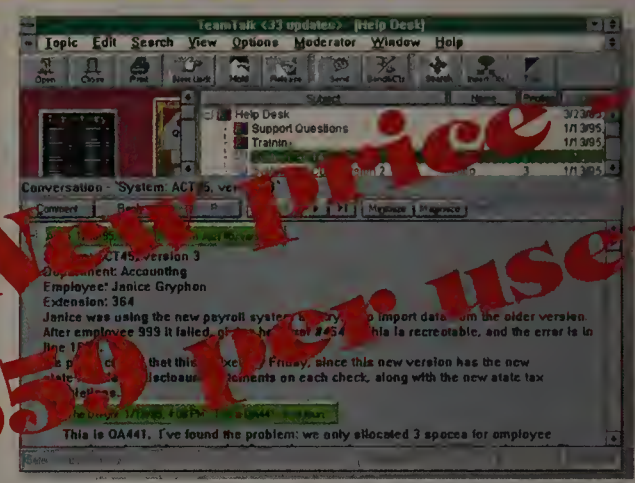
Pro/$8 • 35mm Master/$.90

Professional Output Services
Slides & Overheads, Dye-Sub Color Prints
Huge Color Posters, 4x5 Format Imaging
Canon Digital Lasers, MultiMedia Services

IMAGERS®
Overnight Digital Services
800-774-7216 or 404-351-5800
1575 Northside Drive Suite 490 Atlanta GA 30318

CIRCLE 409 ON READER SERVICE CARD

Groupware for the Masses



TeamTalk is the most effective group discussion available. It installs in minutes and requires no training to get your users up and running. Yet it still offers the powerful capabilities you need and works with your existing systems.

Call today for your free evaluation package or demo disk.

800-367-8729 TeamTalk™
Groupware that Works.

TeamTalk™

Trax
Trax Softworks, Inc. | 800-367-8729 | 310-649-5800 | info@traxsoft.com
TeamTalk is a trademark of Trax Softworks, Inc. http://www.traxsoft.com/traxsoft/
AD PCW0716 050396

CIRCLE 504 ON READER SERVICE CARD

Student - Teacher & School Discounts!

QuarkXPress 3.32 $279

WordPerfect 6.1 Suite $99

Fractal Painter 4.0 $219

3D Studio 2.01A	$195
ABC Graphics Suite 6.0	$149
Animator Studio 1.1	$169
Archicad 5.0 Student	$475
Astound 2.0	$99
Authorware Pro 3.5	$975
Autocad LT 2.0	$339
Borland C++ 5.0	$149
Borland C++ Developer Suite	$199
Canon BJC-210 Color Printer	$219
Coda Finale 3.5	$249
Conversions + 3.5	$99
Corel Office Pro	$179
Delphi Desktop 2	$99
Director 5.0	$589
Director Multimedia Studio 2.0	$899
Director Toolbox Pro	$99
Elastic Reality 1.0.1	$219
Encore 4.0.4	$249
Extreme 3D	$199
EndNote Plus 2.1	$165
Filemaker Pro 3.0	$129
Fontographer 4.1	$149
Freehand 5.0	$189
Freehand Graphic Studio 2.0	$399
Fast Track Schedule 4.0	$129
form Z 2.8	CALL
Infinite FX	$65
Inspiration 4.0	$89
Internet In A Box 2.0	$55
JMP 3.1.5	$329
Kal's Power Tools 3.0	$85
KPT Convolver 1.0	$85
KPT Power Photos 1, 2, or 3	$85
Laplink	$115
Lightwave 3D 5.0	$799
Lotus Smartsuite 96	$169
M.Y.O.B. 6.0	$49
M.Y.O.B. 6.0 With Payroll	$90
Mathcad 6.0+	$149
Mathematica 2.2.4 Student	$149
MeshPaint 3D 1.0	$275
Minicad + 6.0	$319
Minitab 10 XTRA	$199
MediaForge 2.0	$469
MediaPaint 1.1	$199
Micronet 270 MB Syquest	$549
Opcode Vision 3.0	CALL
OmniPage Pro 7.0 Bundle	$189
PageTools 2.0	$79
Portrait Display Pivot 1700 Mtr.	$975
Poser 1.0	$99
Power Utilities	$25
QEMM 8.0	$49
QuarkXPress Passport 3.3.2	$349
Ram Doubler 1.0	$55
Ray Dream Studio 1.0	$219
Real Impact	$1699
Sony Multiscan 15" SF Monitor	$499
Sound Forge 3.0	$249
Strata Studio pro 2.0	$469
Targa 2000 Pro	$4599
The Black Box 2.0	$75
Transjammer Vol 1	$59
Trispectives Pro 1.0	$149
True Space 2.0	$349
Vellum 3D 2.7	$549
Virex 2.9	$49
Visio 4.0	$99
Visual DBase Pro 5.5	$149
Visual Objects 1.0C	$179
Visual Reality 2.0	$149
Wacom Art Pad II 4x5 W/Dabbler	$149
Wacom Art Z II 6x8	$285
xRes 2.0	$199

*Prices and availability subject to change.

Lotus 1-2-3 5.0 $99

Delphi Developer 2.0 $149

Corel Draw 6.0 $195

*SAME DAY SHIPPING ON MOST ITEMS.
*SCHOOL PURCHASE ORDERS WELCOME.
*NO SURCHARGE ON CREDIT CARDS.
*IBM & MAC PRODUCTS AVAILABLE.
*ADOBE, SYMANTEC & MICROSOFT PRODUCTS AVAILABLE TO QUALIFIED STUDENTS, TEACHERS AND SCHOOLS.

PHONE
(800) 289-3275

CALL FOR FREE CATALOG!!
(800)289-3275
INCLUDES COMPLETE PRICE LIST & FREE PRODUCT LITERATURE

WE WILL BEAT ANY ADVERTISED PRICE !

The SOFTWARE Source
THE SOFTWARE SOURCE CO, INC.
2517 Hwy 35, Bldg L, Manasquan NJ 08736
Phone (908) 528-0030 Fax (908) 528-9378

VISA MasterCard DISCOVER

CIRCLE 473 ON READER SERVICE CARD

THE FINEST PC CIRCUIT BOARDS!!!

HSB COMPUTER LABORATORIES

the nations largest full-line PC circuit board specific manufacturer and distributor caters to individuals and businesses interested in only the finest hardware and service at the best price, provided by a long term, financially stable company. For nearly a decade, we at HSB have earned our standing as the most reputable circuit board manufacturer & distributor in the industry. Don't make the mistake of buying 'Throw-Away' circuit boards from a company without any long term commitment to your satisfaction. If we sound like what you are looking for, please give us a call at

(800) 497-0401

-HSB MS5128pc Series 64-Bit PCI Bus MainBoard

CUSTOMER SATISFACTION...

- A comprehensive 72 hour burn-in. We will not ship any board that does not perform flawlessly.
- A full 3 year warranty on all HSB made circuit boards, covering 100% of both parts and labor.
- A limited lifetime warranty on all 45ns 'Turbo' SIMM memory modules and all PGA CPU's.
- A 60-day money-back guarantee. Ensuring that you can't find a better circuit board value.

-HSB 45ns 'Turbo' SIMM memory modules

INNOVATIVE PRODUCTS...

- HSB Pentium® Processor-Based PCI MB, On-Board EIDE, 256KCC, AMI PnP FLASH WinBIOS.....*$CALL*
- HSB Pentium Pro® Processor-Based PCI MB, On-Board EIDE, 256KCC, AMI PnP FLASH WinBIOS.....*$CALL*
- To learn how to receive **FREE** shipping or to receive updated pricing and product descriptions call our 24-hour, toll free **DATA DIRECT** fax-back service line at 800-497-0401!!!

Pentium and Pentium Pro are registered trademarks of Intel Corporation. [Local] 216-498-1356 [Fax] 216-498-1374, 32901 Station Street #299, Cleveland, OH 44139

PC WORLD Business Class SYSTEMS • UPGRADES/MEMORY

NO RISK 30 DAY COMPATIBILITY GUARANTEE

Memory Is Our Only Business

*We give you a lifetime warranty, *guaranteed lowest price, guaranteed compatibility and 99% of all our orders are shipped in 24 hours!

Specials

4x32-70ns 16Meg 72pin $224
2x32-70ns 4Meg 72pin EDO 99
1x32-70ns 4Meg 72pin 54

SIMMS

72 Pin	Parity/Non Parity	80ns	70ns	60ns
2 meg	512x36/32	45/40	48/43	55/50
4 meg	1x36/32	62/52	64/54	74/61
8 meg	2x36/32	114/104	119/99	129/109
16 meg	4x36/32	248/222	252/224	274/249
32 meg	8x36/32	—	519/459	549/489
64 meg	16x36/32	—	1595/1495	—

30 PIN	100ns	80ns	70ns	60ns
256x9 (3 chip)	$6	7	8	—
1x9-1mb (3 chip)	—	19	24	34
1x9-1mb (9 chip)	16	19	29	34
4x9-4mb (3 chip)	—	69	74	84
4x9-4mb (9 chip)	—	79	89	99

LIFETIME WARRANTY

Notebook Memory

Mdle	4MB	8MB	16MB	32MB
AST (all models)	$139	239	479	—
Compaq (all models)	139	249	479	869
DEC (all models)	129	234	479	—
Dell (a models)	129	239	479	—
Epson (all models)	139	229	489	—
IBM (all models)	135	239	479	Call
NEC (all models)	135	239	489	999
Texas Instr. (most models)	179	269	489	879
Toshiba (most models)	129	234	469	898

Video Memory

	80ns	70ns	60ns
256x4 Dipp	$6	7	8
256x16 SOJ	—	29	—
256x16 ZIPP Cas	—	39	—

Desktop Memory

Model	4MB	8MB	16MB	32MB
AST Memory				
AST Advantage, Adventure	79	138	278	598
AST Bravo	79	138	278	598
AST Premium 386 & 486	89	148	—	—
AST Premmia	79	138	278	598
Compaq Memory				
Compaq Deskpro	CALL	CALL	CALL	CALL
Compaq Presario	79	138	278	598
Compaq Proliant, Prolinea, Prosignia	79	138	278	598
Compaq Sytempro	89	178	349	649
Dell Memory				
Dell Dimension	79	138	278	598
Dell Performance	79	138	278	598
Dell Optiplex	79	138	278	598
Dell Omniplex	79	138	278	598
IBM Memory				
IBM Aptiva	79	138	278	598
IBM PS1 Valuepoint	89	148	288	598
IBM PS1 Consultant	89	148	288	598
IBM PS2 (series 30 through 90)	89	148	288	598

Printer Memory

Model	2MB	4MB	8MB	16MB
Epson AL1000, 1500	84	168	—	—
HP IIP, III, IIIP, IIID	72	139	—	—
HP II, IID	72	139	—	—
HP 3SI, 4, 4M, 4SI	69	99	188	379
HP 1200C, DJ200-750	69	99	188	379
HP 4MP, 4P, 4+, 4M+, 4V	69	99	188	379
HP 4MV, 5MP, 5P, 5SI, CJ	69	99	188	379
HP 4L (1MEG)	47	—	—	—
HP DJ 500 Series (256K)	39	—	—	—
HP 5L	—	109	199	—
Panasonic 4410, 4430	88	169	—	—
Panasonic 4420, 4450I	88	169	—	—
TI ML, XL (1MEG)	45	—	—	—

Cache Memory

	25ns	20ns	15ns	12ns
8Kx8	$4	5	6	—
32Kx8	7	8	8	15
32X8(3.3)	9	10	10	17
64Kx1	7	8	9	—
64Kx4	7	8	9	—
16Kx4	5	6	7	—
64x8	—	13	15	—
128Kx8	28	30	35	—

EDO Memory 72 Pin

	70ns	60ns
4Meg	$61	63
8Meg	97	99
16Meg	249	269
32Meg	499	529

*verified in this magazine

AVALON MICRO

688 Unit D, Wells Rd., Boulder City, NV 89005

(800) 610-1214

Hours: Mon. - Fri. 7-5, Sat. 8-1 PST

Phone (702) 293-2300 Fax (702) 293-4453

MasterCard VISA DISCOVER

Conditions: Shipping is non-refundable. 20% restocking on all refunds. All products returned for refund must be in new condition and in original packaging. No refunds after 30 days. Warranty exchange only. RMA# required. Prices subject to change. All prices are final. Trademarks registered with their respective companies. C.O.D. Cashier's Check - add $5.00 C.O.D. Company Check upon approval. Net terms to qualified customers. Shipping 1st 5lbs $9.25.

CIRCLE 456 ON READER SERVICE CARD

IMPORT DATA FROM ANY COMPUTER REPORT INTO:

950023-DIW40A-PCW

Access
Excel
dBase
1-2-3
Paradox
FoxPro
Approach
Quattro
Clarion

DataImport™ 4.0 for Windows™

Go beyond the limitations of import wizards and parsers. Get **TOTAL CONTROL** of your data! With DataImport you can **selectively import data** from columnar and non-columnar text-based reports, dynamically clean-up reports, create data files in **37 output formats** or add data to existing files. DataImport does it all. Call today!

$189 single user $495 5-user LAN

SPALDING SOFTWARE

(770) 449-0594
Fax: (770) 449-0052
email: di-pcw@spaldingsoft.com
http://www.spaldingsoft.com
CIS: GO SPALDING, Lib 2, diwtd.zip

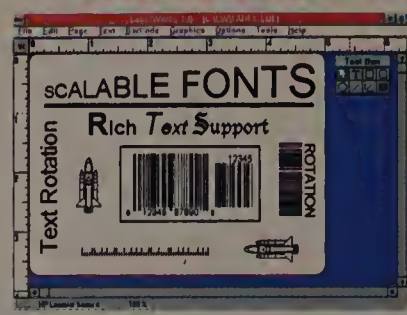
FREE DEMO ONLINE OR CALL

CIRCLE 434 ON READER SERVICE CARD

The Next Generation in Label Design Software

LABELWORKS™

for Windows



LabelWorks sets the new performance standard for professional quality label design. No other program combines such easy operation with this much power!

- Provides Desktop Publishing features to enhance label design. Features include: WYSIWYG, rulers, guides, page zooms, lines, shapes.
- Rich text support allows you to edit font styles, types, and sizes within the same line.
- Supports all major Bar Code symbologies, including Code 39, 93, 128, POSTNET, UPC, Bookland EAN. 19 types in all.
- Imports & Exports using TIFF, GIF, BMP, PCX, WPG, WMF, TARGA graphic files.
- Rotates Text, Bar Codes and imported graphics in 90 degree increments.
- Prints labels on virtually any windows supported printer.
- Prints labels directly from dBase, DIF & ASCII files.

Dealer Inquires Welcome.

Call for Free DEMO Software

AMERICAN MICROSYSTEMS, LTD.
2190 Regal Parkway, Euless, TX 76040

(800) 648-4452 (817) 571-9015 FAX (817) 685-6232

Dave Finally Woke Up!

If you want to get more from your PC experience, connect to PC World Online... *the* online resource for PC buyers and users!

PC World Online Spotlights for July '96:

- **TipWorld delivers valuable tips via E-mail to your PC each business day. Check out http://www.tipworld.com**
- **Cover Story: Best Products of 1996! Did your favorite hardware or software product earn a World Class Award?**
- **PC World Online Plus charter offer! Get more from your favorite Web site at http://www.pcworld.com/pluscharter**
- **Follow PC World Daily News, for late-breaking coverage of the PC industry.**
- **No-Nonsense Guide to Internet Providers: We'll help you find the right service!**
- **Download VRSOCCER.EXE, a FREE trial version of VR Soccer in our file library!**

PC WORLD online

- Prodigy: jump pcworld
- MSN: go to pcworld
- CompuServe: go pcworld
- America Online: keyword pcworld
- Web: http://www.pcworld.com

BAR CODE

BAR CODE READERS

AMERICAN MICROSYSTEMS

2190 A Regal Pkwy. • Euless, Texas 76040 • (817) 571-9015

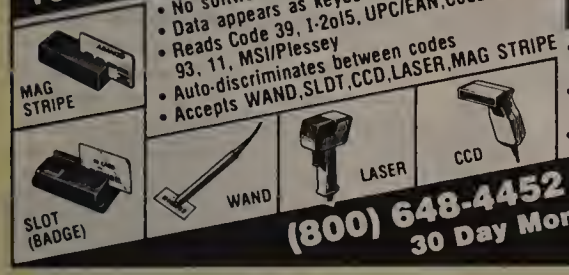
VISA AM EX MasterCard

FOR PC, XT, AT, PS/2 & TERMINALS:

- No software changes required
- Data appears as keyboard input
- Reads Code 39, 1-2of5, UPC/EAN, Codabar, 128, 93, 11, MSI/Plessey
- Auto-discriminates between codes
- Accepts WAND, SLDT, CCD, LASER, MAG STRIPE

BAR CODE PRINTING SOFTWARE:

- For Epson, DKI, IBM, Dot Matrix and HP LaserJet Printers.
- Prints Code 39, 1-2of5, UPC/EAN, Codabar, 128, 93, 11, MSI/Plessey
- Easy To Use



(800) 648-4452 • FAX: (817) 685-6232
30 Day Money Back Guarantee
One Year Warranty

PC WORLD DELIVERS
THE BUYERS YOU NEED TO REACH
Call for Details (203) 857-5101 or (203) 857-5102

BUSINESS APPLICATIONS

The Data Entry Emulator™

Full featured, heads-down data entry, with...

- Two-pass verification
- Powerful editing capability
- Easy output reformatting
- Paint the screen formatting
- Supervisor & batch control
- Customizable menus
- Operator statistics
- Key from images (NEW!)
- Tutorial exercises

FREE 30-day trial

PC | PC LAN | S/36 | AS/400

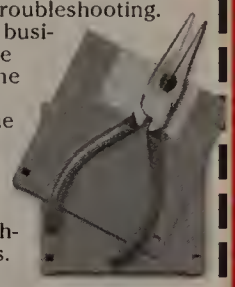
COMPUTER KEYES
21929 Makah Rd.
Woodway, WA 98020
Fax: 206-776-7210
Tel: 206-776-6443
USA: 800-356-0203

EDUCATION

Be a PC repair expert!

CAREER-LEVEL HOME STUDY

Learn PC repair, upgrading, installation, and troubleshooting. Open your own business, or increase your value on the job. Our professional-level home study program lets you learn—and then earn—*without* a costly workshop or high-tech instruments. **Send or call 24 hours a day for your free literature.**



Call 800-223-4542

Name _____
Address _____
City/State _____ Zip _____
Age _____ Phone ( ) _____

The School of PC Repair
PCDI, 6065 Roswell Road
Dept. JJH684, Atlanta, GA 30328

CIRCLE 451 DN READER SERVICE CARD

BUSINESS APPLICATIONS

LASER AND INK JET PRINTER LABELS

Nobody but NOBODY beats our prices - or our quality.

DeskTop offers first class printer labels at the lowest prices anywhere - 30% to 40% less than advertised or even store brands.

Full selection, unsurpassed quality: all popular sizes, styles and applications. Direct from the manufacturer with a Money-back guarantee.

Visa, Mastercard accepted.

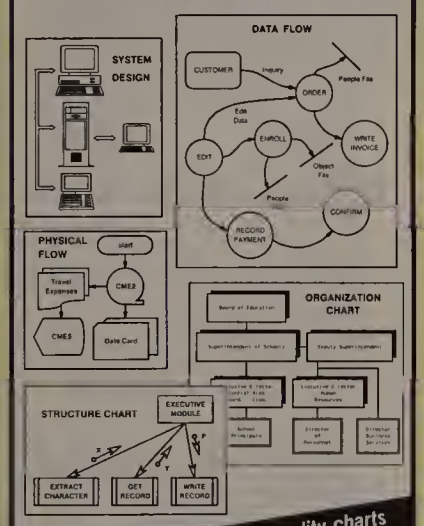
DeskTopLabels
7277 Boone Avenue North,
Minneapolis, Minnesota 55128-1519

Check us out on the web!
http://www.desktop@meyers.com
or call today 800-241-9730

CIRCLE 422 DN READER SERVICE CARD

RFFlow

Professional Flowcharting
For Microsoft® Windows™



Create professional, fine quality charts quickly and easily. Call for free trial disk: (970) 663-5767 FAX (970) 669-4889

$79.00

RFF ELECTRONICS
1053 Banyan Court, Loveland, CO 80538

MAIL ORDER

Mail Order Manager (M.O.M.)™

America's most popular, complete, and affordable solution for the mail order business - order entry/review, credit card processing with draft capture, UPS manifesting, profit analysis, accounting, telemarketing, list management. Clipper compiled, dBase III + files. Single and Multi-user versions. Find out why more people buy MOM after comparing! Call for demo kit.

Dydacomp Development Corporation
150 River Road, Suite N1, Dept. PCW
Montville, NJ 07045
(800)858-DMOM (201) 335-1256

The Mail Order Wizard

Everything you need to manage your mail order company in one software package! Features include:

- order processing
- inventory management
- ad forecasting
- list management
- charge approval/capture
- UPS/USPS manifest with bar coding, and much more.

Single and multi-user systems available. Call our sales reps for a demo kit.

The Haven Corporation
1227 Dodge Avenue, Dept. PWC5
Evanston, IL 60202
(800)676-0098 (847)869-3434

BUSINESS APPLICATIONS

CHURCH SOFTWARE

Discover for yourself why more churches are choosing **PowerChurch Plus.®**
Try out the leading membership and accounting package.
Call today for Free information in the mail.

F1 Software, 208 Ridgefield Drive, Asheville, NC 28806
800/486-1800

CIRCLE 482 DN READER SERVICE CARD

SERVICES/SUPPLIES

MIRROR IMAGES

DISKETTE DUPLICATION

Superior duplication . . .
Your reputation depends on it.
Our reputation assures you of it.

- ALL DISK FORMATS
- FAST 24 HOUR TURNAROUND
- EXCEPTIONAL PRICING AND SERVICE

Call for more information and quotation.

800-322-0577
OHIO - NEW JERSEY

PROGRAMMING

Lahey Fortran

Lahey's award-winning PC Fortrans are ideal for writing new code or downsizing your legacy programs.

•

Lahey's 32-bit Fortran 90 Version 2.0 includes a suite of development tools, Pentium and P6 optimizations, and the ability to create Window applications (Win 3.x, Win95, NT).

•

Other products: 32-bit FORTRAN 77, Lahey Personal FORTRAN 77, and Elf90.

(800) 548-4778 or (702) 831-2500
Fax: (702) 831-8123
email: sales@lahey.com

CIRCLE 470 DN READER SERVICE CARD

SERVICES/SUPPLIES

1-800-8-GLOBAL

GLOBAL®

FREE catalog

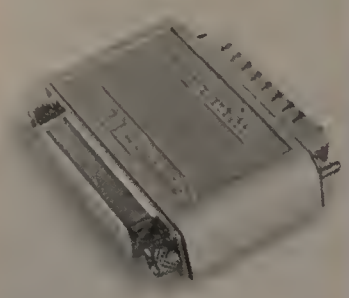
228 page guide to computer furniture, supplies & accessories

COMPUTER SUPPLIES
11 Harbor Park Dr.
Dept. 94 PCW
Port Washington, NY 11050

CIRCLE 508 DN READER SERVICE CARD

SECURITY

Software Developers:



Stop software piracy, expand distribution and increase your software sales

More developers rely on Sentinel® than all other hardware keys combined.

Only Sentinel gives you leading edge security technology, ISO certified quality and the industry's best reliability - all in one affordable key.

And Sentinel is easy to implement and transparent to your customers. Call now to receive your FREE *Sentinel Software Protection Guide.*

(800) 852-8569

SENTINEL
Software Protection

Ask about SentinelLM - the new software-based Network License Management Solution for Windows & UNIX

RAINBOW TECHNOLOGIES

Tel: (714) 450-7300
Fax: (714) 450-7450

http://www.rnbo.com

Distributors located worldwide

©1996 Rainbow Technologies, Inc. Sentinel is a registered trademark of Rainbow Technologies.

CIRCLE 411 ON READER SERVICE CARD

SERVICES/SUPPLIES

DATA RECOVERY: 800 440-1904

Seven good reasons to choose DriveSavers:

1. World's largest, most trusted, and experienced data recovery specialists
2. 24-hr, onsite and weekend service available
3. Proprietary techniques so advanced we retrieve data others might simply abandon
4. Certified to maintain most drive warranties
5. Over 11 years of data recovery experience
6. Featured by CNN, NextStep, C-Net, and *Forbes*
7. All storage devices; Dos, Win95, WinNT, OS/2, Mac OS, Unix, Sun, SGI, Novell

Call when you need us, or visit DriveSavers at: www.drivesavers.com

[illegible] FAX: 415-[illegible]

CIRCLE 431 ON READER SERVICE CARD

SERVICES/SUPPLIES

SINCE 1989, WE'VE PUT MORE LIVES BACK TOGETHER THAN OPRAH, DONAHUE AND DR. RUTH COMBINED.

They aren't just documents and files. They're your life. And that's the way we treat them when you come to us for data recovery. Our vast experience covers platforms for Macintosh, OS/2, DOS, Win95, Novell and UNIX and we are recommended by most major drive manufacturers. While we can't make any guarantees, we can tell you that our data recovery techniques are so advanced we recovered 99% of our client's data 96% of the time. We can do the same for you, too. Quickly, efficiently and painlessly. So, the next time you experience data loss, give us a call. We'll help you make the most of a bad situation.

TOTAL RECALL DATA RECOVERY
2462 Waynoka Road
Colorado Springs, CO 80915
(800) 743-0594 • (719) 380-1616
(719) 380-7022 fax

CIRCLE 437 ON READER SERVICE CARD

SOFTWARE GENERAL

Software Blowout

1000's of low cost programs
Call for **FREE** catalog
MSDOS 6.22 $30; Mathblaster $20
QEMM 7.0 $25; Faxworks Pro 3.0 $20
Falcon Gold CD $30; Corel Draw 4.0 $100
Corel Draw 6.0 $400; ACT/Win 1.1 $50
Doom II $30; Floorplan Plus 3D/Win $10
Battle Chess $5; Lion King Screen Scenes $10
Quickbooks Dlx. CD $50; Dark Forces $30
Win Fax Pro 4.0 $40; Iron Helix CD $10
DacEasy Accounting/Win 2.0 $40
PC Anywhere 2.0/Win $80
Tie Fighter $25; Civilization CD $10
Microsoft Golf CD $10; Corel Flow $30
Dos 5.0 $15; Windows 3.0 $20
Bodyworks CD $10; Pagemaker 6.0 $400
1000's of other titles, call for availability.
+Shipping & Handling; Qty's limited.
www.SoftwareOutlet.com

Software Clearance Outlet
3501 W. Moore Ave. #C
Santa Ana, CA 92704
(800)230-SOFT • (714)434-6425
FAX (714)434-4799

CIRCLE 462 DN READER SERVICE CARD

UPGRADES/MEMORY

WE'LL PAY *YOU* FOR YOUR OLD MEMORY

1x9, 4x9, 30 Pin, 1x32, 2x32, 4x32, 1x36, 2x36, 4x36, 8x36, 72 Pin

TRADE-IN **$ ANY SIMMS $** UPGRADE

NOTEBOOK, LAPTOP, SUBNOTE, CREDIT CARD (IC DRAM) MODULES

ALL MEMORY HAS VALUE

WE NOW BUY & SELL CPU's

OVER 30 YEARS EXPERIENCE

SOJ TSOP ZIP DRAM, VRAM IBM

THE MEMORY LIQUIDATORS

"The company that buys memory back"

1-800-718-7755

531 Main St., Ste.1174, El Segundo, CA 90245 • Ph. 310-326-5656 • Fax 310-326-7790

UPGRADES/MEMORY

TANDY
UPGRADES

Hard Cards for 1000's

21meg $169 210meg $249
42meg $229 540meg $299

1000 EX & HX Hard Drives

21meg $239 $210meg $349

Upgrade Motherboards

80486DX/4-100 $449
Pentium-100 $789

We sell New and Used Hard Drives, Floppy Drives, Ram Memory, Motherboards, VGA & CGA monitors/Cards, Keyboards, CD-ROM drives, and much more for MOST Tandy models. **Call or write for our FREE catalog.**

DCS Industries
5265 Hebbardsville Rd.
Athens, OH 45701
800-537-3539
U.S. & Canada

Foreign 614-594-4180
FAX 614-592-1527

CIRCLE 493 DN READER SERVICE CARD

RECREATION

ULTIMATE MODEM
Call from home or office!

•The Ultimate BBS•

FREE

- Lively Network Chat
- 100,000 Shareware & GIF's, Windows, Mac and DOS files
- Free Internet Accounts
- UNLIMITED ACCESS
- Unlimited Downloads
- Up to 28.8k on all 160 Lines
- New GIF's posted daily by our photographers

1-217-792-3663

Customer Support Voice Line 415-281-4429

CIRCLE 445 ON READER SERVICE CARD

world wide bbs

- GET EXOTIC IMAGES, SHAREWARE, & WINDOWS/DOS FILES -UPDATED DAILY!
- FREE UNLIMITED DOWNLOADS!
- NO SUBSCRIPTION REQUIRED!
- AND NOW...LIVE VIDEO GIRLS!

USE YOUR MODEM TO DIAL

011-373-837-1238

MCI CALLERS: DIAL 10288 FIRST, THEN #.

INTERNATIONAL LONG DISTANCE RATES APPLY
NOT RECOMMENDED FOR MINORS

FREE CD PLUS 58% OFF

☐ **YES. Send me PC WORLD and my free CD-ROM!**

I'll pay just $24.95 for 12 monthly issues–58% off the annual newsstand rate. Plus, I'll receive the exclusive PC WORLD *Shareware CD-ROM* loaded with valuable shareware absolutely FREE.

NAME

COMPANY

ADDRESS

CITY/STATE/ZIP

Please allow 6-8 weeks for delivery of your first issue. Canadian orders please add $20 USD per subscription for postage plus 7% GST (#R124669680). All other countries send $65.97 USD to PC World, P.O. Box 55029, Boulder CO 80322-5029. Printed in the USA. Savings based on newsstand rate of $59.40.

4MJU9

Please Accept Your FREE GIFT!

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1262 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD
Subscription Department
P.O. Box 51833
Boulder, CO 80323-1833

RECREATION

www.virtualaffairs.com

FREE VIDEO CONFERENCING SOFTWARE

Live Shows! • Hottest Pictorials! • World Wide Adult Directory • Best Hot Links!

CIRCLE 488 ON READER SERVICE CARD

LIVE • LIVE • LIVE

CLUBLOVE
ADULT PLAYGROUND

CHECK IT OUT!

http://www.adultplayground.com/pcw

RECREATION

Live Video Fun with GIRLS!!!
These Girls wil for YOU!!!
1 on 1, 2 on 1, HOT Live Chat
ENJOY IT ALL!!!

Download iVi compatible software
via Modem at (954) 984 1148

No recommended for minors

ClickArt/ T/Maker

UNCENSORED ASIAN BEAUTIES

Over 10 GB of high quality adult GIFs.
Loads of original content.
UNCENSORED world-wide live chat.
!! All Free !!
So call Now:
011-852-172-94-949

EroticaEast
THE UNCENSORED BBS

No credit cards required
Not recommended for minors.
Standard long distance charges apply.

CIRCLE 429 ON READER SERVICE CARD

RECREATION

BBS HOT LIST
Onlines Best!

The House of Love
Hot live women online
28.8 access to huge Adult File Libraries
Telnet: 206.148.230.34
Credit Cards Online 954-725-0705

THE PLEASURE ZONE Online
Immediate access to ALL ADULT FILES and LIVE CHAT!
No censorship or restrictions! No credit cards! Completely free!
Just modem in and enjoy the best of online erotica
Int'l. Rates Apply 011-852-1729-0912

ASIAN HEAT
Over 10 GB of quality Adult files to choose from!
Open 24 hours for hot chat with Asian Women!
The ultimate uncensored free BBS!!
Int'l. Rates Apply 011-852-1729-0914

Not recommended for minors

RECREATION

Club Orient

Explore The Uncensored World Of International Online!
FREE! Immediate Access
• Thousands of High Quality Gif's & JPEG's to Download.
• Hot Personal Chat Private or Group...Totally Uncensored!

No Waiting, No Charges & No Credit Cards Needed. Just Dial in with your Modem for a WILD Time!

011-852-1729-0913

Not Recommended for minors. International Rates Apply.

FANTASY SOFTWARE

RELIEVE THE STRESS OF DAILY LIFE WITH OUR
FANTASY DISKS

FANTASY VGA MOVIES – Over 1 MB – TALK thru your speaker or SoundBlaster.
1 Movie $29 · 3 Movies $65 · 5 Movies $94

FANTASY VGA GAME – Over 5 MB with SOUND - 80 Romantic Scenes – 2-8 Players
$79 or $69 w/ purchase of any FANTASY MOVIE above

FANTASY PICTURE CD-ROM – 1000+ VGA pictures, with interactive database - search by YOUR grade, category, description, or date viewed.

FANTASY INTERACTIVE MOVIE CD-ROM – 1full length movie spoof of Plan 9 from Outer Space with scenes from the original - create unlimited GIFS from movie.

FANTASY GAME CD-ROM – 2 CD-ROM set containing 1200 MB of movies plus 4 challenging multi-level arcade games.

FREE VHS VIDEO TAPE (1-2 hr) with each CD-ROM: $59 each or all 3 for $149.

Orders Only: 800-243-1515 Ext. 600 BW
24 HRS/7 DAYS • In PA Add Tax
3.5" or Foreign Orders Add $2 per disk
CHUCK'S Software P.O. Box 220,
Dept. 600BW, Hatfield, PA 19440 / ADD $3 S/H

$1.50 SHAREWARE SPECTACULAR
FREE CATALOG - 600+ PROGRAMS

CIRCLE 405 ON READER SERVICE CARD

RECREATION

Virtual Ecstasy

LIVE VIDEO ONLINE!

GIRLS That You Can SEE, HEAR And SPEAK To.

TOTALLY INTERACTIVE

One to One, Two to One. Journey Room to Room

FREE iView Software

http://www.virtualecstasy.com

Via Modem: 1-954-984-1001

Not recommended for minors

BUSINESS DIRECTORY

Toner Cartridges from $29.70
Oki drum / Epson / NEC specialist
Money Back Guarantee
Toner/Drum/Developer New & Reman.
Corp. Sales & Dealer Programs
Ultimate Image, Inc.
3498 N. San Marcos Pl., Suite #10
Chandler, AZ 85224
(800) 459-9876 / (602) 966-8973
fax (602) 829-6706
http://www.getnet.com/ultimate/

CIRCLE 509 ON READER SERVICE CARD

PC WORLD DELIVERS THE BUYERS YOU NEED TO REACH
Study after study has proven that managers proficient with PCs now control the business PC buying process. Make sure your advertising gets maximum exposure in your best target market.
PC WORLD Marketplace
(203) 857-5101 or (203) 857-5102

INVENTORY MANAGEMENT
Full Transaction Supp, Multi Locations, Stock Status, Purchasing, Job/Dept Costing, Trans Hist Analysis, Trend Analysis, QC Reporting, Bill of Materials, MRP, Serial/Lot Tracking, Quote Prep/Track, Order Processing & Invoice.
Applied Micro Business Systems
177-F Riverside Avenue
Newport Beach, CA 92663
(714) 723-0582 • Fax (714) 675-5325

CIRCLE 514 ON READER SERVICE CARD

MEMORY
BATTERIES & FAX/MODEMS
RAM Memory Upgrades for over 3,600 brands and models of PC's, MACs, Workstations, Laser Printers, Mobile Phones, Camcorders. More choices than anybody else on earth. Low Prices.
VISA • MASTERCARD • AMEX • DISCOVER • PO'S
CONTROL *Memory Factory*
800-952-7867 (408) 437-1122
FAX: (408) 437-1278

CIRCLE 418 ON READER SERVICE CARD

Insures Your Computer
The Computerowners℠ insurance policy repairs or replaces hardware, media and purchased software. $49 a year covers up to $2,000 of equipment against **theft, fire, accidents, power surge, natural disasters and more!** $50 deductible. Call for immediate coverage or information
1-800-800-1492/1-800-SAFEWARE
SAFEWARE, The Insurance Agency Inc.
2929 N. High St., PO Box 02211
Columbus, Ohio 43202
Internet: http://www.safeware-ins.com

CIRCLE 421 ON READER SERVICE CARD

USED SOFTWARE
- Used IBM Compatible Software
- Most Popular Titles Available
- Save up to 50% on Current Versions
- Huge Savings on Prior Versions
- Includes Original Manuals & Disks
- Guaranteed Complete & Virus Free
- 30 Day Money Back Guarantee
- Amex, Discover, MC & VISA
- Call 7am–4pm PST M–F for Free Price List

Recycled Software, Inc.
PO Box 33999
Las Vegas, NV 89133-3999
800-851-2425 • Fax 702-655-5662

CIRCLE 441 ON READER SERVICE CARD

Keys To Success

Earn your B.S. or M.S. degree in Computer Science—without leaving home and without spending thousands of dollars.

- All Courses Home Study
- Approved for tuition reimbursement by leading corporations
- C++, Using Windows, and Ada courses available
- Career*Path* training in computer programming available

AMERICAN INSTITUTE FOR COMPUTER SCIENCES
ACCREDITED MEMBER
World Association of Universities and Colleges

For free information call **1-800-767-AICS**

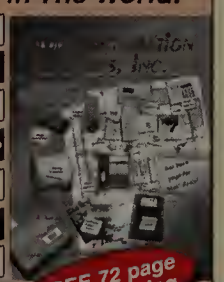
PC WORLD DELIVERS THE BUYERS YOU NEED TO REACH
Call for Details:
(203) 857-5101
(203) 857-5102

SOFTWARE GENERAL

COMPUTER CONTROL OF YOUR HOME!

Largest Selection of Home Automation in The World!

- X-10
- Audio/Video
- Security Systems
- Video Surveillance
- Phone Systems
- Heating/Cooling
- Lighting
- Automatic Feeders



FREE 72 page Color Catalog

Widest Range of X-10 Devices
Call 800-SMART-HOME
24 Hours 800-762-7846 *FAX* 714-708-0614
E-mail: catalog@smarthome.com
http://www.smarthome.com/smarthome

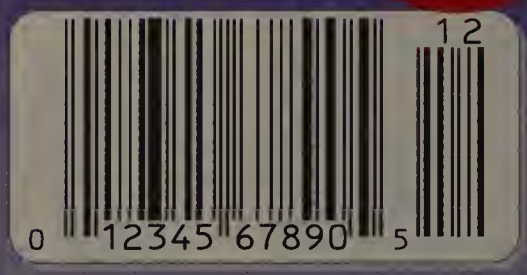
HOME AUTOMATION SYSTEMS, INC.
151 Kalmus Dr., Ste. L-4
Costa Mesa, CA 92626
Questions: 714-708-0160

CIRCLE 490 ON READER SERVICE CARD

Bar Code Headquarters

Labeling Software
For Dot Matrix or LaserJet

For Windows and DOS!



- Any Format, Any Label. WYSIWYG, Text Design
- **Formats for Sears, K-Mart, Penney's, WalMart, TCIF, Logmars, AIAG, etc.**
- UCC-128, UPC/EAN, 2 of 5, Codabar, & Code 39
- Big Text and PCX. Powerful, Versatile, Easy!
- Imports ASCII data files from dBase, etc.
- LabelRIGHT™ for **Windows™ – $295**
- LabelRIGHT™ for **DOS–$279**

Bar Codes for Windows™

- Insert bar codes into any font based Windows program via "Hot Key"
- UPC/EAN, UCC-128,128, 2of5, Codabar, Code 39
- Fonts, Bitmaps and Metafiles, Complete – **$199**

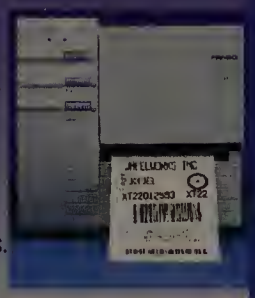
Radio Frequency Terminal

- For IBM or Macintosh Computers

- 150 to 600 foot Range
- 16 Selectable Frequencies
- No License Required
- 2 way RS-232 Communication
- Kybrd, Wand, Laser or CCD
- 1-16 Terminals/Base Station
- 6.3" x 3.3" x 1.25", 12 oz.
- Base Station – **$795**
- Complete Terminal – **$1095**

Thermal Transfer Printers

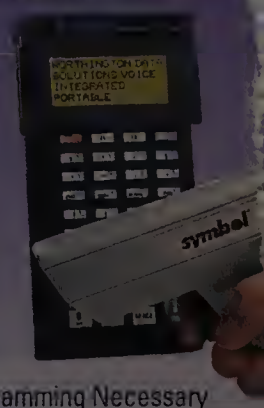
- 2" per second Thermal Transfer – Up to 4" wide
- Supports all Popular Bar Codes; 1 year Warranty
- Prints Bar Codes, Big Text, and PCX Graphics
- Small size, Weighs 20 lbs.
- Complete with labels, ribbon, cable, LabelRIGHT DOS software, and Datamax Allegro Printer – **$1495**



Portable Bar Code Reader
for PC, Mac and Serial

With Voice!

- Battery Operated Reader – 64K or 256K
- Attaches as 2nd Keyboard or Serial
- Display messages & voice messages prompt operator.
- Pick lists, tables.
- Wand, CCD or Laser Scanner
- UPC/EAN, 128, 2of5, MSI, Code 39, etc.
- Date/time stamps
- Built-in Inventory Programs No Programming Necessary
- **Very Easy to Create Custom Prompts**
- Small Size-Weighs Only 12.5 oz.
- 64K Unit Complete with Wand & Voice – **$79**
- 256K Unit Complete with Wand & Voice– **$89**



Bar Code Readers
for PC, XT, AT, PS/2, Mac and RS-232 Terminals

- Attaches as 2nd Keyboard
- UPC/EAN, Code 128, 2of5, MSI, Code 39, etc.
- Wand, Magstripe, CCD, Slot Badge or Laser
- All European Keyboards Supported
- Superior Read Rates. Made in USA.
- **Top Rated by Independent Reviews**
- Complete Wand only Reader – **$329**
- Complete Cordless Wand Scanner – **$595**
- Complete with Laser Scanner – **$655**

Low Cost Laser Reader

- Integrated Laser Handheld Wedge Reader with Decoder in Handle for PC or Mac
- Outstanding Price, complete only – **$655**

Ordering is Easy! 800-345-422

Europe Phone: (353) 1 6614 566 • Europe Fax: (353) 1 6614 622 USA Phone: 408-458-9938 • USA Fax: 408-458-99

- **Same Day Shipping**
- **30 Day Money Back Guarantee**
- **Direct from Manufacturer**
- **Free "800" Support**
- **Free UPS Blue in USA**

In Europe call our Ireland Office.
353 1 6614 566 (Fax: 353 1 6614 622)

WORTHINGTON DATA SOLUTIONS

Call for our Free Catalog

Own A 6x86 For $399.99

It's E-Z TO INSTALL

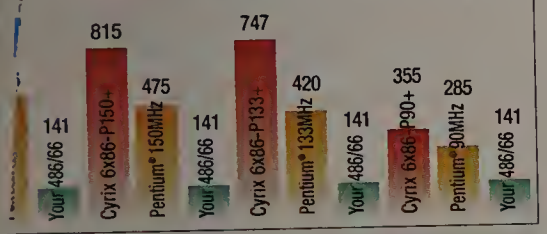
Credible Price Breakthrough On The New Cyrix 6x86. World's Fastest Windows PC!

Why The Cyrix 6x86 Is The Fastest...

86 has architectural features not found on any other proces-
ed to the Intel Pentium... well, there isn't much of a com-
Cyrix 6x86 is much closer to Intel's latest Pentium Pro (P6)
dard Pentium. But the Pentium Pro is not a good choice for
are. It isn't optimized for x86 software—which includes all
vs 3.x and Windows 95 software. It's well known that the
runs Windows 20% slower than even the standard Pentium.
, the Pentium Pro was designed for operating systems that
perating yet. On the other hand, the Cyrix 6x86 *is* optimized
are. The Cyrix 6x86 has the same advanced features of Intel's
but they're all tailor made for the kind of applications you
the game is to run DOS, Windows 3.x and Windows 95 appli-
Pentium Pro isn't even in the right ballpark. And the Cyrix
e pennant for the world's fastest processor.

World's Fastest Processor!

Si v8.0 Results: ***The World's Fastest Processor For DOS, Windows 3.x And Windows 95!***



Superscalar *architecture provides two pipelines to execute multiple instructions in parallel. This means faster processing.*

Superpipelining *increases the number of pipeline stages to avoid execution stalls. This allows the Cyrix 6x86 to perform a cache access in one clock cycle, versus the two clock cycles required on the Pentium.*

Register renaming *provides temporary storage for instant data availability without waiting for the CPU to access the cache or main system memory.*

Data dependancy removal *provides instruction results to both pipelines simultaneously so that neither pipeline slows or becomes stalled.*

Speculative execution *allows the pipelines to continuously execute instructions following a branch operation without stalling the pipelines.*

Out-of-order-completion *lets the faster instruction exit the pipeline out of order, saving processing time without disrupting the program flow.*

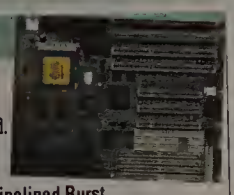
80-bit floating point unit *(FPU) makes the Cyrix 6x86 perfect for CAD, spreadsheets, databases and all applications designed for serious number crunching. All told, the Cyrix 6x86 is the best choice for all of today's operating systems. Not just DOS and Windows 95, but also OS/2, Solaris, UNIX, NextStep and many more. And the Cyrix 6x86 makes the perfect network server. Performs flawlessly with Novell NetWare, Banyan Vines, Microsoft LAN, Windows NT and others. And why shouldn't it? The Cyrix 6x86 is so compatible, it even runs on the same motherboards as the Pentium. (Unlike some others.)*

You get the best of both worlds with this amazing offer: the world's fastest processor in its class, and a high-performance, top-quality motherboard. For starters, you'll love the added performance the onboard PCI Controller delivers. Together with an Enhanced-IDE hard disk, you'll witness data transfer rates over 16 MB/second—easily 5 times faster than earlier hard disks. And large 1 or 2 GB hard disks install with a single click—totally automatic. The printer port is the latest ECP/EPP design, which moves data over 10 times faster than earlier parallel ports. You get faster printing, faster parallel drive backups and more. The two serial ports contain top-notch 16550 UART chips, which are vital to reliable modem tranfers at 28.8KB/second. The Plug and Play BIOS automatically configures PCI cards for hassle-free installation.

Available:
plete
ade Kits
otherboard Only!

System Features
- Three 5.25" Drive Bays
- Two 3.5" External Drive Bays
- One 3.5" Internal Bay
- 230 Watt Power Supply

OTHERBOARDS!



Available:
erboard with chip Only. Use your existing
—and simply slip in this advanced 686 board.
s just a few minutes to install and connect.
des Three or Four PCI Local Bus Expansion
, Four Industry-Standard ISA Slots, 256KB Pipelined Burst
M, Supports Up To 128MB Memory, Four 72-pin SIMM Slots, Supports
dard And EDO Memory, 32-Bit Enhanced PCI IDE Controller, Supports Up
our EIDE Devices, Mode 4 Hard Disk Rates To 22MB/Sec., Two 16550
-Speed Serial Ports, ECP/EPP High-Speed Parallel Port, Plug And Play
S, Intel PCI Chipset, Award PCI BIOS, Flash RDM Upgradeable BIOS,
Hard Disk Detection, Setup, Supports Diskette Drives Up To 2.88MB,
-Virus Built Into BIOS, Green PC Power Management, Clock: 40, 50, 60,
IHz, Supports Cyrix And Pentium CPUs To 200MHz

Processor	BUS	ZIF Socket	Slots	Plug & Play	Max DRAM	EDO RAM Support	SIMM Sockets	Write Back Cache	Flash AMI BIOS	2-Serial 1 Parallel	E-IDE Devices	Motherboard Only Item#	Price Each	Case	Power Supply	Kit	Kit
6x86-P90+	PCI	Yes	3PCI, 4ISA	Yes	128MB	Yes	4	256 Pipelined	Yes	Yes	4	A115-1092	$319.99	Mid	230	A115-1090	$399.99
Other Units Available:																	
6x86-P133+	PCI	Yes	4PCI, 4ISA	Yes	128MB	Yes	4	256 Pipelined	Yes	Yes	4	A113-8634	$469.99	Mid	200	A113-8633	$549.99
6x86-P150+	PCI	Yes	4PCI, 4ISA	Yes	128MB	Yes	4	256 Pipelined	Yes	Yes	4	A113-8651	$535.99	Mid	200	A113-8650	$615.99
6x86-P166+	PCI	Yes	4PCI, 4ISA	Yes	128MB	Yes	4	256 Pipelined	Yes	Yes	4	A113-8667	$769.99	Mid	200	A113-8666	$849.99

TIGER'S GUARANTEED LOWEST PRICES ON ACCESSORIES, MEMORY AND DRIVES!

VERSTOCK BLOWOUT MEMORY!

PNY — *Tiger sells genuine PNY products.*

andard 70 Nano-Second Memory SIMMS

n #	Description	Price Each
32	4MB non-parity 72 Pin	$74.99
36-70	4MB parity 72 Pin	$89.99
32-EDO	4MB EDO 72 Pin	$84.99
32	8MB non-parity 72 Pin	$149.99
36-70	8MB parity 72 Pin	$169.99
32-EDO	8MB EDO 72 Pin	$159.99
32	16MB non-parity 72 Pin	$309.99
36-70	16MB parity 72 Pin	$319.99

Hard Drive SALE! Maxtor

THIS MONTH'S SPECIAL!
1.6 GB Now Just $259.99

LOWEST DRIVE PRICES EVER!

#M122-1200 ..... $259.99

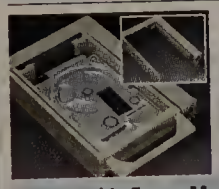
Maxtor Hard Drives		Price Each
M122-1000	Maxtor 1.0GB Hard Drive	$219.99
M122-1300	Maxtor 1.3GB Hard Drive	$229.99
M122-1200	Maxtor 1.6GB Hard Drive	$259.99
M122-2000	Maxtor 2.0GB Hard Drive	$349.99

Other brands and sizes available. Call for details!

Turn Your Hard Disk Into A Handy Parallel-Port*able!*

Plug in the IDE cables, Snap On The Cover and Ready for any parallel port!

H22-1100 Quick IDE To Parallel HD Kit . .$99.99



The Hard Disk Travel-Package!

Aegi's rugged case holds your hard drive! Take it with you!

Removable Frame Mobile Rack For 3.5 HD

A113-2001 IDE $39.99
A113-2000 SCSI $39.99

Laser Pointer

The greatest single leap in presentation technology—the laser pointer—is now affordable!

Just $29.99

A127-1000 Laser Pointer $29.99

Print Screen SAVE!

Now you can "Print Screen" from Windows—just like you did in DOS! It's an industry smash hit!

Just $29.99

J27-1002 Print Screen $29.99

FREE VIDEO!

A step-by-step guide (VHS format) to upgrading your old PC. Just follow the tape! This exclusive Tiger production shows you how to remove the drives, memory and peripherals from your old PC and install them into your new Cyrix 6x86—in just minutes.

Carl Fiorentino

Carl Fiorentino President, TigerSoftware

HOW TO ORDER YOUR NEW CYRIX 6x86

We're open around the clock from Monday 8 a.m. until Saturday 12 Midnight and Sunday 8 a.m. until 11 p.m.(EST). Please call us at (800) 364-9483 to place your order or fax to (305) 529-2990. International customers call (305) 671-3300. **CORPORATE, EDUCATIONAL AND VOLUME SALES:** Call (800) 269-8710 for quantity pricing volume bids, educational bids, and site licenses. **PAYMENT:** VISA, MasterCard, American Express, Discover Card, Carte Blanche, Diners Club, personal checks and money orders. We DO NOT CHARGE YOUR ACCOUNT until we have SHIPPED your order! **SHIPPING METHODS:** NEXT DAY AIR on in-stock items. Areas serviced overnight by UPS may be shipped UPS. Back Orders shipped "best way." **30 DAY GUARANTEE.** Everything you buy from Tiger is backed by our 30-Day Guarantee against defects. If your new Cyrix computer is defective, we will gladly and promptly exchange it for a new unit. Sorry, no refunds, of course, prices are always dropping on CPU's and Motherboards. Tiger does not give protection on these items in the event prices do drop. *Return instructions and our return policy are included in your order. Alaska, Puerto Rico and Hawaii add an additional $10 delivery charge. International orders charged additional shipping & handling. Tiger reserves the right to substitute product of equal or greater value. ALL PRICES AND OFFERS SUBJECT TO CHANGE. TigerSoftware is a registered trademark of TigerDirect, Inc. All trademarks appearing herein are acknowledged. Not responsible for typographical errors or errors in technical description of products herein.*

Shipping Charges:

First Item..... $6.99
Each Additional Item $1.00

Shipping & handling is $6.99 for the first item, and $1.00 for each additional item up to 7 pounds total. Overweight orders (over 7 lbs.), shipping & handling charges are $1.00 per pound. UPS shipping and handling charges apply to computers, hardware and peripherals

IN STOCK AND READY TO SHIP! 800-364-9483 • INTERNATIONAL : 305-671-3300 *Please Mention Code: "CDE"*

Circle 229 on reader service card

Video Training for Windows Applications

KEYSTONE
LEARNING SYSTEMS

KeyStone, Your Windows Training Specialists

Alison Balter
Microsoft Certified Trainer
& Access Instructor

Dennis Taylor
Microsoft Excel Specialist
& Excel Instructor

Dawn Bjork
Microsoft Certified Trainer
& Word Instructor

Access 95 or 2.0*

Beg/Int/Adv (ea) $49.95
Special-All Three $129.95
Developer Lev. 1-3(ea) $89.95
Developer Lev. 4-6(ea)$89.95
Developers Toolkit $89.95
Special-All Seven $495.95
Special-All Ten $595.95

Visual Basic 4.0

Level 1/2/3 (ea) $89.95
Level 4/5/6 (ea) $89.95
Special-Any Three $249.95
Special-All Six $449.95

Visual C++ 4.0

Level 1-6 (ea) $89.95
Special-All Six $449.95

Excel 95 or 5.0*

Beg/Int/Adv (ea) $49.95
Special Features $49.95
Special-All Four $159.95
VBA Lev 1/2/3 (ea) $49.95
Special-All Seven $279.95

PowerPoint 95

Beg/Int/Adv (ea) $49.95
Special-All Three $129.95

PageMaker 6.0

Beg/Int/Adv (ea) $49.95
Special-Any Three $129.95

1-2-3 Rel. 5

Beg/Int/Adv (ea) $49.95
Special-All Three $129.95

Word 95 or 6.0*

Beg/Int/Adv (ea) $49.95
Mail Merge $49.95
Forms $49.95
Desktop Publishing $49.95
Special-Any Three $129.95
Special-All Six $239.95

Windows 95 or 3.1*

Beg/Int/Adv (ea) $49.95
Special-All Three $129.95
Networking $49.95
Installation $49.95
Special Features $49.95
Special-All Six $239.95

Project 95 or 4.0*

Level 1/2/3/4 (ea) $79.95
All Four Videos $299.95

Other Video Courses

Microsoft Training Videos

Microsoft Office 95 Combinations .....Call
Microsoft Office Integration $19.95
Excel 95 - Beg/Int/Adv .....(set) $129.95
Mail $49.95
Publisher 95 - Besics/Pwr Tools ...(set) $89.95
SMS Server 1.1 - Level 1/2/3 ....(set) $249.95
SQL Server 6.0 - Level 1/2/3 ....(set) $249.95
VBA for Excel 95 Level 1/2/3 .....(set) $129.95
Windows 3.1 - Beg/Int/Adv .....(set) $129.95
Windows for Workgroups 3.x $59.95
Windows NT 3.5x- 4 videos .....(set) $299.95
Works 95 - 2 videos .....(set) $89.95

Lotus Training Videos

Lotus Smert Suite Combinations .....Call
AmiPro 3.0 - Beg/Int/Adv .....(set) $129.95
Approach 96 - Beg/Int/Adv .....(set) $129.95
cc:Mail - Sys Admin Lev 1/2/ User ....(set) $199.95
Freelence 96 - Beg/Int/Adv .....(set) $129.95
Notes 4 - App Dev Lev 1/2 & Sys Admin Lev 1/2 & User .....(set) $379.95
Organizer 2.0 .....$49.95
Word Pro 96 - Beg/Int/Adv .....(set) $129.95

Novell Training Videos

Novell Perfect Office Combinations .....Call
Envoy 1.0 .....$49.95
GroupWise 4.1 - User Level 1/2 ...(set) $89.95
GroupWise 4.1 - Admin - Level 1/2 (set) $159.95
InfoCentral 1.1 .....$49.95
Netware 4.1 - Level 1-7 .....(set) $495.95

Ask About!
Delphi 2.0
WordPerfect 7

Presentations 3.0 - Beg/Int/Adv ..(set) $129.95
Quattro Pro 6.0 Beg/Int/Adv .....(set) $129.95
WordPerfect 6.1 - Beg/Int/Adv ...(set) $129.95

Miscellaneous Training Videos

ACT! 2.x Beg/Int/Adv .....(set) $129.95
AutoCAD 13 - Level 1-4 .....(set) $329.95
CorelDraw 5 - Beg/Int/Adv .....(set) $129.95
OsteCAD 5.02 - Beg/Int/Adv .....(set) $199.95
dBase 5.0 - Beg/Int/Adv .....(set) $129.95
Delphi 2.0 - Level 1-6 .....(set) $449.95
Internet User - Explor the Net Lev 1/2 Netscap Nev .....(set) $129.95
Internet Dev - HTML Dev Lev 1-3 ..(set) $249.95
Paradox 7 - Beg/Int/Adv .....(set) $129.95
Peachtree 3.0 - Beg/Int/Adv .....(set) $129.95
PowerBuilder 4.0 - Level 1/2/3 ...(set) $249.95
QuarkXPress 3.32 - Beg/Int/Adv ..(set) $129.95
Quicken 4.0 - Besics/Pwr Tools ....(set) $89.95
QuickBooks 4.0 - Beg/Int/Adv ....(set) $129.95

KEYSTONE
Learning Systems Corp.

Domestic Shipping 2-3 Days: $5.00 for the first two videos; plus $1.50 for each additional video tape. International Orders: Shipping cost will vary, call for details.

All Videos Available in PAL (European Format)

**Prices and course may vary*

Average: 2 hours of training per video

KEYNOTES $14.95 ea

RISK FREE 30 DAY Money Back Guarantee

Microsoft Office

Special MS Office 95 or 4.x Video Combinations

Microsoft Office Standard 95 or 4.x ..... $349.95 (WITH KEYNOTES $469.95)
- 3 Word, 3 Excel, 3 PowerPoint (Beg/Int/Adv)
- 9 videos with over 17 hours of training

Microsoft Office Pro 95 or 4.x ..... $495.95 (WITH KEYNOTES $639.95)
- 3 Word, 3 Excel, 3 Access (Beg/Int/Adv)
- 3 PowerPoint, (1 Schedule+ or 1 Mail)
- 13 videos with over 24 hours of training

Microsoft Office Plus 95 or 4.x ..... $579.95 (WITH KEYNOTES $749.95)
- 3 Word, 3 Excel, 3 Access (Beg/Int/Adv)
- 3 PowerPoint, 3 Windows, (1 Schedule+ or 1 Mail)
- 16 videos with over 29 hours of training

MS Office 4.x Integration Video **$19.95** with any Combo purchase

Microsoft SOLUTION PROVIDER

Developer

Special Developer Pack Video Combinations

Developer Power Pack Special $649.95
- Any 9 videos (Save $160.00)

Developer Power Pack Pro $795.95
- Any 12 videos (Save $283.00)

Developer Power Pack Plus $1,149.95
- Any 18 videos (Save $470.00)

Visual Basic 4.0
- Level 1, 2, 3, 4, 5, & 6
- Client/Server Development
- Three Tier Architecture

SQL Server 6.0
- Level 1, 2, & 3

Access 95 Developer
- Level 1, 2, 3, 4, 5, 6, OTK

Visual C++ 4.0
- Level 1, 2, 3, 4, 5, & 6

Visual FoxPro 3.0
- Level 1, 2, 3, 4, 5, & 6

Delphi 2.0 (Ask About)
- Level 1, 2, 3, 4, 5, & 6

PowerBuilder 4.0
- Level 1, 2, & 3

Internet Developer
- HTML Level 1, 2, & 3

SmartSuite

Special SmartSuite 96 or 4 Video Combinations

Lotus SmartSuite 96 or 4 Standard $349.95
- 3 Lotus 1-2-3, 3 WordPro, & 3 Freelance Graphics
- 9 videos with over 17 hours of training

Lotus SmartSuite 96 or 4 Pro $495.95
- 3 Lotus 1-2-3, 3 WordPro, 3 Approach
- 3 Freelance Graphics, & 1 Organizer
- 13 videos with over 24 hours of training

Lotus SmartSuite 96 or 4 Plus $579.95
- 3 Lotus 1-2-3, 3 WordPro, 3 Approach,
- 3 Freelance Graphics, 3 Windows, & 1 Organizer
- 16 videos with over 29 hours of training

3 Easy Ways to Order:

CALL ▶ 1-800-748-4838
801-375-8680

FAX ▶ 1-801-373-6872

MAIL ▶ KeyStone Learning Systems Corp.
2181 Larsen Parkway
Provo, UT 84606

http://www.keylearnsys.com/ AD# PW76

We accept C.O.D., Company P.O. or check +

Circle 136 on reader service card

WE WILL TRY TO MATCH OR BEAT ANY ADVERTISED PRICE. CALL FOR LATEST PRICING!!

WE ACCEPT PO'S FROM QUALIFIED FIRMS

30 DAY MONEY BACK GUARANTEE

MEMORY

LIFETIME WARRANTY

SECURITY WILL CALL WINDOW NOW OPEN! NO SURCHARGE FOR MC, VISA AE & DISCOVER

HOT BOX SPECIALS

★ LIMITED QUANTITIES ★

Thinkpad 750, 720, 700, 4Meg	$ 99.00
Zeos Meridian Notebook, 16Meg	379.00
HP 5000/Twinhead Slimnote 8 Series, 16Meg	419.00
Winbook, 8Meg	89.00
Compaq LTE LITE, 4Meg	79.00
HP 5L, 4Meg	89.00
256 x 3-80, 30 Pin	5.00
256 x 3-70, 30 Pin	6.00
1 x 3-70	19.00
512 x 36-80, 2Meg, 72 Pin	30.00
IBM 6450603, 1Meg	19.00
IBM 6450604, 2Meg	29.00
NEC Versa, 32Meg	519.00

CACHE MEMORY

	12NS	15NS	20NS	25NS
8Kx8	–	6.50	6.00	5.50
32Kx8	9.00	4.50	4.25	4.00
32Kx8 (3.3V)	–	14.00	9.50	–
54Kx1	–	11.00	9.00	8.00
54Kx4	–	11.00	9.00	8.00
54Kx8	–	15.00 (5V)	19.00 (3.3V)	–
16Kx4	–	8.00	7.00	6.00
128Kx8	–	29.50	26.00	24.00
32x8 SOJ	–	12.00	11.00	9.00

Call for SOJ Version

CACHE MODULES

256K (160 pin) Pipeline Burst Cache Module $39.00

512K (160 pin) Pipeline Burst Cache Module $69.00

256K (160 pin) Async Cache Module compatible with IBM Aptiva $49.00

Individual D-RAM Chips

MEMORY FOR IBM & APPLE

	60NS	60NS	70NS	60NS	100NS
1Megx1	–	6.85	6.45	5.95	4.95
1Megx4	–	49.00	39.00	38.00	–
1Megx4 (Zip Pk)	–	24.00	22.00	21.00	–
256x4(Page Dip)	–	7.25	6.75	6.50	5.95
256 4(Static Dip)	–	–	9.95	–	–
256x4(Page Zip)	–	9.25	9.00	8.95	–
256x4(Video Zip)	–	–	10.95	9.95	7.95
256x8(SOJ)	–	19.00	18.00	–	–
256 x1	–	3.25	2.95	2.75	2.25
64x4	–	–	–	3.75	–
64x1	–	–	–	–	2.00
256x16 SOJ	–	39.00	29.00	–	–
256x16 SOJ Edo	–	39.00	–	–	–
256x16 Video Zip	–	49.00	39.00	–	–

INTEL Math Chips

80287-XL	49.00
80387-16 DX	39.00
80387-20 DX	44.00
80387-DX (Does All)	49.00
80487-SX (Does All)	183.00
Intel SX (Does All)	49.00
Intel SL Mobil	39.00
Intel 16SX	29.00
Intel 20SX	29.00

Lowest price on Intel overdrive chips

CYRIX Fasmath

Cyrix 33DX $49 Cyrix 40DX $79

CYRIX DRx² 386 to 486 Upgrade Clock Doubler

CX486 DRx²-25/50 ..... 199.00 CX486 DRx²-33/66 ..... 199.00 CX486 SRX² 25/50 ..... 189.00

SIMM MODULES (Add $5.00 for SIPP)

	40NS	50NS	60NS	70NS	80NS	100NS
256 x 9	–	–	–	10.00	9.00	8.00
1Meg x 9 (3 chip)	–	–	21.00	21.00	21.00	–
1Meg x 9 (9 chip)	–	–	26.00	25.00	24.00	17.00
4Meg x 9	–	–	89.00	85.00	84.00	–
16Meg x 9 (9 chip)	–	–	–	459.00	–	–

72 PIN SIMMS (EISA), EDO

	60NS	70NS	80NS
258 x 36 1 mg	35.00	34.00	35.00
512 x 36 2 mg	49.00	49.00	49.00
1 meg x 36 4 mg	79.00	75.00	79.00
2 x 36 8 mg	149.00	144.00	149.00
4 x 36 16 mg	309.00	299.00	309.00
8 x 36 32 mg	599.00	599.00	599.00
16 x 36 64 mg	1589.00	1569.00	1589.00
1 x 32 4 mg	60.00	59.00	60.00
2 x 32 8 mg	134.00	129.00	134.00
4 x 32 16 mg	269.00	259.00	269.00
8 x 32 32 mg	489.00	479.00	489.00
1 x 32 4 mg EDO	69.00	64.00	69.00
2 x 32 8 mg EDO	139.00	135.00	139.00
4 x 32 16 mg EDO	269.00	259.00	269.00
8 x 32 32 mg EDD	559.00	549.00	559.00

DIMMS (168 pin)

1 x 64	4Meg	119.00
1 x 64	8Meg	144.00
2 x 64	16Meg	279.00
4 x 64	32Meg	589.00
8 x 54	64Meg	1179.00
16x64	128Meg	4269.00
3.3V	4Meg	Call
3.3V	8Meg	Call
3.3V	16Meg	369.00
3.3V	32Meg	739.00
3.3V	64Meg	Call
5V EDD	4Meg	Call
5V EDD	8Meg	Call
5V EDD	16Meg	Call
5V EDD	32Meg	Call
5V EDD	64Meg	Call

ECC Simms/Dimms Moduels

Pentium Pro 72 Pin (install in pairs) / SIMMS	
8Meg	219.00
16Meg	399.00
32Meg	799.00
64Meg	2599.00
128Meg	5189.00
5V, 168 Pin (install in pairs) / DIMMS	
16Meg Kit (P/N D3556)	488.00
32Meg Kit (P/N 02355)	976.00
64Meg Kit (P/N 3554)	1959.00
3.3V, 168 Pin / DIMMS	
16Meg Kit	547.00
32Meg Kit	1098.00
64 Meg Kit	2196.00
128 Meg Kit	6954.00
256Meg Kit	10,858.00

SO DIMMS

72 Pin, 3.3V	4Meg	119.00
72 Pin, 3.3V	8Meg	219.00
72 Pin, 3.3V	16Meg	439.00
72 Pin, 3.3V	32 Meg	Call
72 Pin, 5V	4Meg	119.00
72 Pin, 5V	8Meg	219.00
72 Pin, 5V	16Meg	429.00
72 Pin, 5V	32 Meg	Call
144 Pin, 3.3V	4Meg	279.00
144 Pin, 3.3V	8Meg	549.00
144 Pin, 3.3V	16Meg	Call
144 Pin, 3.3V	32 Meg	Call
144 Pin, 5V	4Meg	244.00
144 Pin, 5V	8Meg	489.00
144 Pin, 5V	16Meg	Call
144 Pin, 5V	32 Meg	Call

AST MEMORY

MODEL	AMT. UPGRADED	AST PART #	PRICE
Bravo LC Series, Bravo MT, Bravo MS, MS-L, Advantage Pro DX33, SX25	4Meg	500987-002	79.00
	8Meg	500987-003	158.00
	16Meg	500987-004	279.00
	32Meg	500987-005	536.00
Premmia LX P/60, MX4/66d, 4/100T, P/60	8 Meg	500987-003	158.00
	16 Meg	501340-002	279.00
	32 Meg	500987-005	536.00
	64 Meg	501569-001	Call
Premmia 4133, 4133S, 4/50d, 4/60d	8 Meg	501159-002	158.00
Premmia SE 4/33, 4/66d, P/60	16 Meg	501159-003	278.00
Premmia MTE 4/33, 4/66d, P/60	32 Meg	501159-004	578.00
Manhattan G, V Series Server	64 Meg	501159-005	1072.00
Power Premium 3/33, 4/33, 4/33S, 4/50d, 4/66d	8Meg	500780-001	198.00
Premium 486/25, 486/25E, 486/33, 486/33E			
Premium 386/33TE, 486/25TE, 486/33TE			
Prem. II 386/25, 386/33, 486/33, 486 SX/20			
Bravo 486/25, 486/33	2 Meg Kit	500780-005	68.00
Advantage 486/25, 486/33, 486/33P, 486 SX/20			
Premium SE4/22	8Meg Kit	500780-001	198.00
Premium SE 4/50, d, 66d, P/60	1 Meg	500780-003	34.00
Prem. 386/33T, 386 SX16, Prem II 386SX.20, 386/25	4Meg	500780-004	99.00
Premmia GX P/90, P/100	8Meg Kit/16MegKit	501565-001/501566-001	158/278
	32Meg Kit/64Meg Kit	501567-001/501568-001	578/1072
AST Cupid Board	0-32 Meg	500818-001	159.00

AMBRA

Ambra Pentium-60	4/8/16 Meg	89/169/369
Ambra NC 425SL	2/4/8 Meg	79/129/199
Ambra N Series	*4/8/12/16 Meg*	*139/219/320/439*
Ambra SN Series	4/16 Meg	139/529
Ambra Sprinta SLC II	2/8 Meg	64/210
Ambra N-75, N-100	4/8/16	139/269/524

We also sell Memory for: Dell, Gateway, HP, DEC, Sun, Zenith, Acer, NEC and Epson

NO SURCHARGE FOR MASTERCARD, AMEX, VISA OR DISCOVER. PURCHASE ORDERS ACCEPTED FROM FORTUNE 2000, GOVERNMENT & INSTITUTIONS. California orders add 8.25% sales tax. Returned orders or ordered wrong parts are subject to a 20% restocking fee. (Memory chips not installed in boards.) We accept International orders shipped via UPS Air. APO, FPO orders welcome. Customers are expected to pay customs and "other" charges if shipped Int'l. All credit card charges verified for fraudulent use. SORRY, NO REFUNDS AFTER 30 DAYS – EXCHANGES ONLY. If you receive defective merchandise we exchange only—no refunds. We accept MC, VISA, Discover, AE, prepaid orders, purchase orders, wire transfer, COD (cashiers check) orders, cash & cashiers checks. Orders shipped by UPS, FEDX must be signed for. • ALL MANFACTURER PART #'S ARE FOR REFERENCE ONLY • MINIMUM ORDER $40.00 • NO REFUNDS ON SHIPPING

IBM PS/1, PS/2 MEMORY MODULES

IBM PART NO.	WORKS WITH MODEL NO.	PRICE
30F5360 (2Meg)	30-286, 25-286, 50 MTHR 8D	91.00
6450604/92G7196 (2Meg)	70-061, E61, 121, 50Z, 55SX, 65SX, P-70, 55LS, 65LS, X-Station 120 & 130, 35SX, 35LS, 40SX	49.00
6450608 (2Meg)	70-A21, A-61, 8-21, 8-61, 35SX, 35LS, 40SX, Val Pt. 325T	49.00
34F2933 (4Meg)	35SX, 40SX, 55SX, 65SX, 55LS, 65LS	89.00
87F9977/92G7199 (4Meg)	55SX, 55LS, 65SX, 40SX, 35SX, 35LS	89.00
92F9935 (2Meg)	P/S1 & P/S1/386SX-2121	69.00
92F9694 (4Meg)	P/S1 & P/S1/386SX, Model-2121	119.00
92G7200 (4Meg)	PSI Expert, Consultant, Willow	89.00
4Meg/8Meg/16Meg/32Meg	*PC 300 Series*	*67/134/279/536*
4Meg/8Meg/16Meg/32Meg	*PC 700 Series*	*67/134/270/536*
4Meg/8Meg/16Meg/32Meg	*PC Power Series*	*67/134/270/536*
4Meg/8Meg/16Meg/32Meg	*PC Server 300, 325, 520*	*67/134/270/536*
8Meg/16Meg/32Meg (Ecc)	*PC Server 500*	*219/419/819*
02G7334 (16Meg 168 pin Edo)	*IBM 730/750*	*388.00*
02G7335 (32Meg 168 pin Edo)	*IBM 730/750*	*749.00*
92G7539 (4Meg)	Aptiva 310, 330, 350, 510, 530, 710, 730, Pentium	67.00
92G7541 (8Meg)	Aptiva 310, 330, 350, 510, 530, 710, 730, Pentium	134.00
92G7543 (16Meg)	Aptiva 310, 330, 350, 510, 530, 710, 730, Pentium	279.00
92G7545 (32Meg)	Aptiva 310, 330, 350, 510, 530, 710, 730, Pentium	536.00
73G3131/92G7201 (4Meg)	Value Point Performance, PC Server 4/66	89.00
73G3132/92G7203 (8Meg)	Value Point Performance, PC Server 4/66	169.00
60G1622/92G7204 (16Meg)	Value Point Performance, PC Server 4/66	349.00
92G7205 (32Meg)	Value Point Performance, PC Server 4/66	689.00
6450902 (2Meg)	56, 57, 57SX, 90, 95, P-75, 57SLC, Value Point 77 486DX2, 486SX, SVR 85	69.00
6450128/92G7200 (4Meg)	57SX, 90, 95, P-75, 57SLC, 56, 56SLC, P/S1, 386SX, Mod-2123, 2133, 2155, Val Pt 77, 486CS2, 486SX, SVR85, Value Point 77 486DX2, 486SX, SVR 85	86.00
6450129/92G7428 (8Meg)	35SX, 40SX	169.00
6450130/92G7202 (8Meg)	56, 57, 57SX, 90, 95, P-75, 57SLC, Value Point 77 486DX2, 486SX, SVR 85	169.00
6451158/92G7208 (4Meg ecc)	486, 95XP; 95A (install in pairs)	109.00
6451159 (8Meg ecc)	486; 95XP, 95A (install in pairs)	219.00
92G7209/32G3720 (16Meg ecc)	9595 DPT	399.00

IBM NOTEBOOK & LAPTOP MEMORY

07G1415/07G1420 (4Meg)	Thinkpad 750, C, 700, C, 720, C, CL57SX	146.00
07G1416/07G1421 (8Meg)	Thinkpad 750, C, 700, C, 720, C, CL57SX	279.00
66G0095 (16Meg, 32Meg)	Thinkpad 750, C	488/976
66G0094 (4Meg)	Thinkpad 755, 360, 355, 340, 450	119.00
66G0094 (8Meg)	Thinkpad 755, 360, 355, 340, 450	219.00
66G0094 (16Meg, 32Meg)	*Thinkpad 755, 360, 355, 340, 450*	*439/1069*
4Meg/8Meg/16Meg	*Thinkpad 500*	*119/219/429*
8189098 (4Meg)	Thinkpad 500, 510CS (3.3 volt)	129.00
8189099 (8Meg, 16Meg)	Thinkpad 500, 510CS (3.3 volt)	249/489
79F0999 (2Meg)	LX40, N33SX, PS Note	69.00
79F1000 (4Meg)	LX40, N33SX, PS Note, Tkpd 350, 350c, PS Note 425	119.00
79F1001 (8Meg)	LX40, N33SX, PS Note	219.00
Hard Drive (810 Meg, 1.3 Gig)	Thinkpad 750, 755, 360, 355	719/797
(4Meg/16Meg)	Thinkpad 755 Dimm Modules	119/459
(4Meg/16 Meg w/Adap	Thinkpad 755	198/597
60G0378 (8Meg)	Thinkpad 350, 350c, PS Note 425	229.00
60G0379 (16Meg)	Thinkpad 350, 350c, PS Note 425	457.00
4Meg/8Meg/16Meg	*Thinkpad 360, 365*	*119/210/420*
4Meg/8Meg/16Meg/32Meg	*Thinkpad 700*	*146/279/488/976*
4Meg/8Meg/16Meg	*Thinkpad 701*	*109/209/419*
92G7259 (4Meg)	Thinkpad 701C, CS, Butterfly	109.00
92G7261 (8Meg)	Thinkpad 701C, CS, Butterfly	209.00
92G7263 (16Meg, 32Meg)	Thinkpad 701C, CS, Butterfly	419.00
4Meg/8Meg/16Meg (730T only)	Thinkpad 340, 730T	139/269/524/1586
(4Meg, 8Meg, 16Meg)	Thinkpad 760	119/239/449
8Meg/16Meg	Thinkpad 820	390/729
4Meg/8Meg/16Meg/32Meg	Thinkpad 850	193/399/719/1439
4Meg/8Meg/16Meg/32Meg	*Thinkpad 760*	*119/224/430/1460*
Hard Drive (810Meg)	*Thinkpad 760*	*529.00*

COMPAQ MEMORY MODULES

Deskpro 386S	1Meg Module/4Meg Module	79/129
	1Meg Board/4Meg Board	99/201
Deskpro 386 25E/20E	1Meg Module/4Meg Module	79/129
	1Meg Board/ 4 Meg Board	99/201
Deskpro 386/25, 20	1Meg Module/4Meg Module	79/129
Deskpro System Pro 386/33, 486/25, 486/50L	2/8/32Meg	91/244/854
Deskpro 4/66I, 4/33I, 4/25IS, 3?33I, 3/25I	2/4/8Meg	59/89/169
Deskpro "M" Series	Expansion Board OK	119
Deskpro 450, 466, 4100, 575, 590, 5120, 5133	4/8/16/32Meg	89/169/369/689
Deskpro XE 433S, 450, 466	2/4/8Meg	69/109/209
Deskpro XE 560 (pairs)	4/8/16/32/64Meg	67/134/279/536/999
Deskpro XL450, 466, XL560, xl566, XL575, 5100 xl590	4/8/16/32/64Meg	67/134/279/536/999
Presario 433, CDS520, CDJV520, CDL524, CDS526, CDTV528, 660, CDS660, CDS720, CDS724, CDS744, CDS860, CDS920, CDTV920, 924, CDS924, CDS954	4/8/16/32Meg	67/134/279/589
Presario 400 Series, 600 Series, 800 Series	4/8/16/32Meg	67/134/279/589
Presario CDS774, CDS972, CDS982, CDTV978, CDS974 (in pairs), CDS992, 7152, 7170, 7180, 9546, 9548, 9564	4/8/16/32Meg	67/134/279/589
Prolinea 4/25S, 4/33, 4/33S, 4/50, 4/66, CDS	1/2/4/8Meg	59/69/89/169
Prolinea MT 4/33S, 4/50, 4/66, Enhanced 4/33S, 4/50S, 4/50, 4/66	4/8/16/32 Meg	89/169/349/699
Prolinea 450, 466, 4100, 575, 590, 5120, 575, 590, 5120, 575 mini, 5100 mini, 5133 mini	4/8/16/32Meg	89/169/349/699
Proliant 1500 5/75, 5/100, 1500R S/75, 5100 (install in pairs)	4/8/16/32Meg	67/134/279/536
Prosignia 300, 575, 590, 500 5/90, 500 5/120 (install in pairs)	4/8/16/32Meg	67/134/279/536
Proliant 1000 5/60, Prosignia 5/60 (install in pairs)	8/16/32/64/128	134/279/536/999/2000
Proliant 2000 486/50, 5/66, 5/90, 2000R 5/66, 5/90 (install in pairs), 4000 486/50, 5/66, 5/90, 5/100, 4000R 5/66, 5/90, 5/100, 4500 5/100, 4500R 5/100	8/16/32/64/128	134/279/536/999/2000

COMPAQ LAPTOPS & NOTEBOOKS

Compaq LTE 5000 Hard Drive	*810Meg, 1.3Gig*		*699/779*
Elite 5000, 5200	*8Meg/16Meg/32Meg/64Meg*		*210/410/762/1525*
LTE/386S/20	4Meg Module	121125-002	129.00
LTE LITE/20, 25, 25C	4Meg Module	129769-002	129.00
LTE LITE/20, 25, 25C	8Meg Module	129769-003	229.00
LTE LITE/20, 25, 25C	16Meg Module	129769-004	509.00
LTE LITE 425C/33C/25E/25L	4Meg Module	142337-002	134.00
LTE LITE 425C/33C/25E/25L	8Meg Module	142337-003	250.00
LTE LITE 425C/33C/25E/25L	16Meg Module	142337-004	460.00
SLT/386	4Meg Module	118305-001	129.00
Concerto, LTE Elite	4Meg	144790-001	119.00
	8Meg	144790-002	219.00
	16Meg	144790-003	429.00
Contura 320, 325	4Meg	139498-001	119.00
	8Meg	139499-001	219.00
Contura 400, 410, 420, 430	4Meg/8Meg/16Meg		119/211/437
Contura 4/25, 4/25C, 4/25CX	4Meg	146520-001	119.00
	8Meg	146521-001	229.00
	16Meg	146531-001	469.00
Aero 4/25, 4/33	4Meg	190532-001	109.00
	8Meg	190597-001	209.00

HARD DISK DRIVES

CONNER			MAXTOR			WESTERN DIGITAL		
850MB	CFS 850A	$213	1.0 GIG	7850 AV	$219	850MB	AC2850	$218
1.2 GIG	CFS 1275A	240	1.2 GIG	71260 AV	242	1.2 GIG	AC31200	240
1.6 GIG	—	287	1.6 GIG	—	285	1.6 GIG	AC31600	307
1060 SCSI		279						
2.1 SCSI		629						

PCMCIA VERSION 2.0

MODEL	PRICE	MODEL	PRICE
S-RAM Cards 1MEG	$119	Portable CD ROM (2x) & Card	$289
S-RAM Cards 2MEG	199	*SCSI Type II*	*119*
28.8/14.4 Data/Fax Modem	189	*Audio Card*	*149*
14,400/14,400 Data/Fax Modem	94	Multimedia Combo, Sound/SCSI	499
Readwriter Card (15A Slot)	149	Type III 260 Mg Hard Drive	419
Lan Ethernet (Coax), (10 Base T)	89	Type III 340 Mg Hard Drive	567
		Xircom Combo Ethernet + Modem II 28.8 Adapter	549

FLASH RAM (ATA) — Works with Digital Cameras Kodak DC-50 & More
4 Meg–169 8 Meg–256 16Meg–399 20Meg & 40Meg–CALL NON ATA–CALL

CUSTOMER SERVICE & TECHNICAL: OPEN M–F, 9–4 PST

All products brand new & guaranteed • We buy excess inventory

Trademarks are registered with their respective companies.

L.A. TRADE

22825 Lockness Avenue • Torrance, CA 90501

BATTERIES

★ ★ CALL FOR NOTEBOOK AND LAPTOP BATTERIES ★ ★
Compaq, IBM, Toshiba, Epson, AST, TI and More!!

TOSHIBA LAPTOP MEMORY

MODEL	AMT. UPGRADED	MANU. PART #	PRICE
Tecra 700 (SDRAM)	*8Meg/16Meg/32Meg*		*279/549/1099*
T2000SXE/2200SX/T1800, 1850, C	2Meg/4Meg/8Meg	PC-PA2000U	69/139/279
T2100, 2105, 2150, 2155, 2110, 2115	4Meg/8Meg/16Meg/24 Meg		107/259/449/671
T4400SX, SXC T6400, T6600	4Meg	PC-PA2004U	129.00
T4400SX, SXC T6400, T6600	8Meg	PC-PA2005U	229.00
T4400SX, SXC T6400, T6600	16Meg	PC-PA2010U	499.00
T4500, C, T4600, T4700, T1900, C, T1910, T1950 (3.3 v)	4Meg	PC-PA2012U	119.00
T4500, C, T4600, T4700, T1900, C, T1910, T1950 (3.3 v)	8Meg	PC-PA2013U	219.00
T4500, C, T4600, T4700, T1900, C, T1910, T1950 (3.3 v)	16Meg	PC-PA2014U	429.00
T4700, 4800, 4850 (Hard Drive)	810Meg/1.3 Gig		709/819
T3400CT, T2400, T3600	4Meg/8Meg/16Meg	PC-PA2019U	129/249/519
T600, 610, CT Edo	8Meg/16Meg/32Meg		219/489/957
T400CS, 400CDT, T100, 105 Edo	*8Meg/16Meg/32Meg*		*219/489/957*

NOTEBOOK, LAPTOP MEMORY

MODEL	AMT. UPGRADED	MANU. PART #	PRICE
ACER 730, 735C, 760, 780	2Meg/4Meg/8Meg		89/139/268
ACER 763, 765, 782, 784, 786, 787,	4Meg/8Meg/16Meg		119/219/439
ACER 750	4Meg/8Meg/16Meg		119/219/439
ACER Note Pro, ACER Note Lite	*4Meg/8Meg/16Meg*		*109/199/439*
ARM TS38	4Meg/8Meg/16Meg		119/219/439
AST Ascentia J10	*8Meg/16Meg/32Meg*		*199/359/695*
AST Ascentia 900N, 800N, 810, 910	4Meg/8Meg/16Meg		119/219/439
AST Ascentia 950	8Meg/16Meg		269/499
AST Bravo & Explorer	*4Meg/16Meg*	*501255-001, -002*	*109/439*
AST Notebook Prem Exec 386SX/20/25/25L	4Meg	500814-003	109.00
AST Power Exec 3/25C, 425EL, 425SL	4Meg/16Meg	501166-001, -003	119/459
AST Power Exec 4/33SL	4Meg/16Meg	501318-001,002	139/479
AT&T Globalyst 130, 200 (Call for other Globalyst)	4Meg/8Meg/16Meg		119/219/439
AT&T Safari NSX/20	4Meg	PEC 37651	219.00
Austin DX4, DX2, SX2, SX Series	4Meg/16Meg		119/449
Bondwell 8310, Plus	1Meg	23050-09100	59.00
Bondwell 8310V, SX	4Meg		206
Canon Innova Book 150	4Meg/16Meg		119/467
Canon Innova Book 200LS	4Meg/8Meg/16Meg/24Meg		119/219/439/671
Canon Innova Book 350CD	*4Meg/8Meg/16Meg*		*139/229/499*
Canon Innova 486-10	4Meg/16Meg		119/489
Canon Notejet 486-25	4Meg/8Meg		139/289
Canon Notejet 486-33, 486C, 25 and 33	4Meg/8Meg		149/289
Canon Notejet 486c, 75, 100	8Meg/16Meg		219/499
Compuadd 450ns, 475ns	4Meg/16Meg		139/499
DEC HiNote, Ultra HiNote	4Meg/8Meg/16Meg		119/219/449
DEC HiNote VP	*8Meg/16Meg/32Meg*		*279/549/Call*
Dell Lattitude LX 4100C, MX, MC, M	4Meg/8Meg/16Meg		109/199/457
Dell Lattitude XPI	4Meg/8Meg/16Meg		109/199/457
Dell Lattitude XP, 475, 4100, 4100CX	4Meg/16Meg		129/449
Dell Latitude 486, 425, 433C, 433CX, 450, 450CX	4 Meg/16 Meg		129/449
DTK, DTN 4T 100P, 5P60	4Meg/16Meg/32Meg		229/469/919
Epson ActionNote 650, 650c, 660c, 660cx	4Meg/8Meg/16Meg		119/219/439
Epson ActionNote 700, 700c, 700cx	4Meg/16Meg		119/499
Epson ActionNote 800, 880, 866c	4Meg/8Meg/16Meg/20Meg		119/219/459/599
Epson ActionNote 800	*4Meg/8Meg/16Meg*		*119/229/499*
Epson ActionNote 4000 Notebook	6Meg		189
Epson ActionNote 4LC/25, 4LC/33, 4SLC/2-50	6Meg		189
Everex Tempo LX, LX20, Carrier	2Meg	PCA 00053-0001	89.00
Fujitsu N85100	*8Meg/16Meg/32Meg*		*279/549/Call*
Gateway 2000 Colorbook 4/33	4Meg/16Meg		109/439
Gateway 2000 Nomad 425 DXL/SXL	4Meg/16Meg		170/759
Gateway 2000 486 Handbook or Liberty	4Meg/16Meg		119/459
Gateway 2000 Solo Series	8Meg/16Meg/32Meg		Call
HP Omnibook 300, 480, 425	2Meg/4Meg		83/129
HP Omnibook 530, 600	4Meg/8Meg/12Meg		119/229/419
HP Omnibook 4000	4Meg/8Meg/16Meg		119/229/499
HP Omnibook 5000	8Meg/16Meg/32Meg		229/499/999
Leading Edge Aviva 2000	4Meg/16Meg		119/459
Lexmark SE10	4Meg/8Meg		119/249
Magnavox Metalis	4Meg	286, 386SX	119
Midwest Micro Elite SX-25, SX33, DX2-50, DX2-66	4Meg/8Meg/16Meg		119/219/469
Midwest Micro Elite Sndbk SX33, DX3-50, DX4-75, DX4-100	4Meg/8Meg/16Meg		119/219/469
Midwest Micro Elite Sndbk Plus D5-75, 05-90	4Meg/8Meg/16Meg		119/219/469
Mitsuba Ninja II	4Meg/8Meg/16Meg		119/219/469
MPC Model 380	4Meg/8Meg/16Meg		119/219/469
NCR Safari 3180, 3181	4Meg/8Meg		119/229
NEC Ultralite Versa, E, V, MP	4 Meg/8Meg/16Meg/20Meg	DP4104	119/229/469/589
NEC Versa Removable Hard Drive	810Meg/1.3 Gig		509/779
NEC Versa S, Versa 2000C & 2000D	4Meg/8Meg/16Meg		119/219/469
NEC Versa 4000, 4050/4080	4/8/16/32Meg		119/219/469/799
Packard Bell 386SX, 286	4Meg	286, 386SX	119
Packard Bell Statesman	2Meg/8Meg		69/219
Panasonic CF170, CF270, CF370	1Meg	CF-BA16S	49.00
Panasonic CF380, CF480	2Meg/4Meg/6Meg		79/119/179
Panasonic CF-V21P, CF-580	4Meg/16Meg		119/439
Panasonic CF-V41	4Meg/8Meg/16Meg/32Meg		119/219/449/999
Sanyo 17/18 NB	2Meg	MBC-NBMEM2	89.00
Sharp 6781, 6881, 6785, 6700, 6800, 6741	2Meg/4Meg		89/149
Sharp 8150, 8650, 8660, 7700, 7760	4Meg/16Meg		119/439
Sharp 8700, 8800, 8900	4Meg/8Meg/16Meg		109/219/439
Sharp 3010, 3020, 3050, 3060	4Meg/8Meg/16Meg		104/199/439
TI 4000, TI 4000E, TI 4000M	4Meg/16Meg		170/768
TI 5000, 5100	*8Meg/16Meg*		*274/549*
TI 6000	*8Meg/16Meg*		*219/399*
TI Extensa, 450, 450T, 455, 455T	4Meg/8Meg/16Meg		119/219/419
TI Extensa, 550, 555, 560, 565 (pairs)	*4Meg/8Meg/16Meg*		*119/219/419*
Tandy 1510, 2810, 3810	1Meg		59.00
Tandy 2820, 3820, 3830	2Meg/4Meg/6 Meg		79/119/179
Twinhead, Altima, Compudyne, 486SX, OX, Tandy 4860	4Meg/16Meg		119/499
Twinhead Slimnote 5	4Meg/8Meg/16Meg		129/249/499
Ultra 486 TS38	4Meg/8Meg/16Meg		129/249/499
Winbook XP	4Meg/16Meg		119/499
Zeos 386SX Notebook (not the + version)	2Meg		89.00
Zenith Master Sport 386SX	2Meg	ZA-300-1	99.00
Zenith Master Sport SL, SLE, 600, 620, 625NL	2Meg	ZA-4-4	89.00
Zenith Super Sport 286, 286E	1Meg	ZA-180-66	99.00
286E, SX	2Meg	ZA-180-64	89.00
SX Alpha/SX Beta	2Meg	ZA-180-86/ZA-180-87	89.00
Zenith Z-Note 425LN, LNC, LNP	4Meg		129.00
Zenith Z-Star 4/33	2Meg/8Meg		69/219
Zenith Z-Star EX	*4Meg/8Meg/16Meg*		*119/219/450*

LASER PRINTER MEMORY UPGRADES

AMOUNT UPGRADED	0K 8d	256k	1	2	3	3.5	4	S	8	8	16	32
Brother 630, 631, 641, 645	–	–	69	89	–	–	–	–	–	–	–	–
Canon LBP 430	–	–	39	–	–	–	89	–	–	–	–	–
Canon LBP 860, 1260	–	–	–	69	–	–	99	–	–	199	359	699
Canon LBP4, 4Lite, 4plus	–	–	129	179	–	–	–	–	–	–	–	–
Epson 6000, Action Laser	–	–	–	129	–	–	229	–	–	–	–	–
Epson Action Laser 1100, 1600	–	–	69	70	–	–	99	–	–	199	359	–
Epson Action Laser II	–	–	74	–	173	–	–	272	–	–	–	–
Epson 8000, 1800, 4000, 4100, 4300	–	–	89	–	173	–	–	272	–	–	–	–
Epson 1000, 1500, 5000, 5200	–	–	–	89	–	–	178	–	–	–	–	–
HP 2, 2D–	–	–	–	79	–	–	119	–	–	–	–	–
HP 3, 30, 3P, 2P 2P+	–	–	–	*79*	–	–	*119*	–	–	–	–	–
HP 4, 4M, 4Si, 4SIMX	–	–	–	59	–	–	89	–	–	169	–	–
HP 4P, 4PLUS, 4MPm 1600, 1600CM	–	–	19	39	–	–	67	–	–	134	–	–
HP 4L	–	–	59	–	–	–	–	–	–	–	–	–
HP 3SI	–	–	69	–	–	–	89	–	–	169	–	–
HP 5L	–	–	49	74	–	–	139	–	–	269	–	–
HP 5P, 5MP, 4V, 4MV	–	–	19	39	–	–	67	–	–	134	279	–
HP Design Jet 600, 650, 200	–	–	–	69	–	–	89	–	–	189	369	689
HP Deskjet 500, 500C, 510, 550, 560	–	*34*	–	–	–	–	–	–	–	–	–	–
HP Deskjet 1200C, 1200C/P	–	–	–	69	–	–	89	–	–	129	–	–
HP Paintjet XL300	54	–	–	–	–	–	89	–	–	144	299	–
IBM Laser 4019, 4019E	–	–	–	–	–	139	–	–	–	–	–	–
IBM Laser 4029, 4037	–	–	–	–	–	–	129	–	–	–	–	–
IBM Laser 4039, 4079	–	–	–	*69*	–	–	*119*	–	–	*209*	–	–
Konica LP-3110, 3115	–	–	119	189	239	–	–	–	–	–	–	–
Lexmark Medley 4C, 4x, 4SX	–	–	Call	Call	Call	–	–	–	–	–	–	–
Lexmark, Optra L, LX, R, RX	–	–	–	–	–	–	67	–	–	134	279	689
Lexmark Valuwriter 300,600	–	–	59	69	–	–	129	–	–	–	–	–
Lexmark Winwriter 200, 400, 600	–	–	59	69	–	–	129	–	–	–	–	–
NEC 90, 290	–	–	–	89	–	–	–	–	–	–	–	–
NEC 95, 97	–	–	–	79	–	–	–	–	–	–	–	–
Oki 400	–	–	–	79	–	–	–	–	–	–	–	–
Oki 400E, 400EX, 410E, 410EX	–	–	89	109	169	–	189	–	–	–	–	–
Oki 830, 840	–	–	–	89	–	–	–	–	–	–	–	–
Oki 2350, 2450	–	–	Call	Call	–	–	–	–	–	–	–	–
Packard Bell PB 9500	–	–	–	139	–	–	227	–	–	–	–	–
Packard Bell 9815	–	–	–	139	–	–	229	–	–	–	–	–
Panasonic 4420/4450I	–	–	–	99	–	–	169	–	–	–	–	–
Panasonic 4410/4430	–	–	–	*99*	–	–	*159*	–	–	–	–	–
Panasonic 4450	–	–	89	–	–	–	–	–	–	–	–	–
Panasonic 4400/5400	–	–	89	99	–	–	189	–	–	–	–	–
Panasonic 4440, 5410, 6500	–	–	79	99	–	–	159	–	–	–	–	–
Sharp 9400, 9460, 9600, 9700E	–	–	69	99	–	–	189	–	–	–	–	–
Sharp 9500, E, H, 9700, H	–	–	79	–	–	–	259	–	–	–	–	–
TI XL/PS17/PS35	–	–	49	–	–	–	–	–	–	–	–	–
TI Microlaser Pro E, Powerpro, Pro 600	–	–	89	129	–	–	189	–	–	329	–	–
TI Microwriter	–	–	79	119	–	–	–	–	–	–	–	–

H.P. COMPATIBLE FONT CARTRIDGE

BAR CODES Bar Code Reader Fonts	99.00
IBM 4019, 4019E, FONT CARTRIDGE 209 Fonts, Turbo Card	105.00
TURBO 25 Comparable to Pacific Data's 25 CARTRIDGES IN ONE!™, 143 Fonts *(compat with Epson Action Laser II and all HP Printers)*	69.00
TURBOSCRIPT™ 109, 109 Scalable Fonts to Any Point Size HP2D, 3, 3D, 3P, 2P, 2P+	149.00
TURBOSCRIPT™ 109, 109 Scalable Fonts to Any Point Size HP2	179.00
TAX & FINANCE FOR IBM 4019, 4019E, 4029	139.00
TAX & FINANCE CARTRIDGE	84.00
OKI 400, 800 41 fonts, 11 typestyles	169.00

LAPTOP, NOTEBOOK 2.5" HARD DRIVE

2.5" IDE Internal Hard Drive — Most Notebooks Supported
810MEG 12.5mm $499 1.3MEG 19.0mm $799

310-539-0019
FAX: 310-539-5844

SECURITY WILL CALL WINDOW NOW OPEN

CALL TOLL FREE **1-800-433-3726** (US and Canada)

ESTAB. 1985

Prices & Availability Subject to Change Without Notice

Mon-Fri, 8:00 a.m. to 5:00 p.m. PST
Sat. 10:00 a.m. to 12:00 noon

PRICES MAY FLUCTUATE. CALL FOR LATEST PRICING!!

These disks are exactly the same, but somebody just paid $100,000 for the one on the right.

If you illegally copy software, you commit a federal offense and risk a fine of up to $100,000. You also lose the benefits of licensed software, such as documentation, upgrades and technical support. And you may get something you don't want – a virus. Don't be a software pirate.

Get the facts.

Copying software is against the law. To clean up your software or to report someone who should, call our Piracy Hotline at **(800) 388-7478**; or see us on the World Wide Web at **http://www.spa.org**.

spa

Don't Copy That Floppy™

© 1996 Software Publishers Association.
Symantec and The Norton Utilities are trademarks of Symantec Corporation. Used with permission.

Help end the class struggle.

Here's your chance to train the next generation of knowledge workers before they show up for work.

Donate your unused computers, software, and peripherals directly to your local school.

Or contact Computers for Classrooms at one of the numbers below, and we'll direct your donations for you.

Either way, your generosity will pay off in gigabytes.

COMPUTERS FOR CLASSROOMS

Because instead of tossing your equipment out, or selling it for a few cents on the dollar, you'll be providing our classrooms with the most powerful teaching aid since teachers.

And getting a tax deduction in the bargain.

So donate the best—and most—equipment you can afford. When you do, you'll be helping a whole new class of people to succeed.

Gifts In Kind America
800-862-GIFT

The East-West Education Development Foundation
617-542-1234

The National Cristina Foundation
800-CRISTINA

Buddy-Up with Education
800-53-BUDDY

PCs COMPLEAT
800-204-5507

CALL for Guaranteed Lowest Price on Systems*
*Call for details

We Carry over 30,000 Products! Call Today!

YOUR NOTEBOOK

TOSHIBA

Satellite Pro 410

Satellite Pro 410
- Built-in 4X CD-ROM Drive (Active model only)
- Built-in 16-bit sound, microphone, speaker & MIDI
- EDO RAM memory, expandable to 40MB
- Built-in AC adapter - small, sleek design & reduced weight
- Integrated Accupoint - small, accurate & easy to use
- Lithium Ion battery technology
- Built-in infrared for wireless communications

Processor	Screen	RAM/HD	Price
Pentium 90	11.3" Dual Scan SVGA	8/772MB	$3199
Pentium 90	11.3" Active SVGA	8/772MB	4399*

* Features built-in 4X CD-ROM drive

Satellite 100CS

Processor	Screen	RAM/HD	Price
Pentium 75	10.4" Dual Scan	B/504MB	$1969*

* Features EDO RAM memory

Portégé 610CT
90MHz Pentium
- Pentium 90MHz processor
- 9.5" True Color display for optimum color
- Built-in 16-bit SoundBlaster Pro compatible sound, microphone & speaker
- Lithium Ion battery technology
- Integrated Accupoint for easy control

Processor	Screen	RAM/HD	Price
Pentium 90	9.5" True Color	8/720MB	$3139

Portégé 610CT

Tecra 720

Built-In CD-ROM 6X Speed!
BIG! 11.3" or 12.1" Display

Tecra 700 and 720
- Pentium 120MHz & 133MHz processors
- PCI bus architecture (internal & external)
- 11.3", 800x600 high res. display (Tecra 700)
- 12.1", 1024x768 high res. display (Tecra 720)
- Built-in 28.8 fax/modem with speaker phone (Tecra 720 model only)
- Built-in 6X CD-ROM Drive (Tecra 720)
- Optional 4X CD-ROM Drive (Tecra 700)

Processor	Screen	RAM/HD	Price
Pentium 120	11.3" Dual Scan SVGA	BMB/1.13GB	$3999
Pentium 120	11.3" Active SVGA	16MB/1.13GB	4999
Pentium 133	12.1" Active SVGA	16MB/1.2GB	6299*

* Features built-in 6X CD-ROM drive

TOSHIBA ENCORE
Authorized Reseller of Toshiba Factory Refurbished Products Call For Details

Introducing Toshiba Refurbished Notebooks UNBELIEVABLE PRICES!
- Manufacturer Warranty
- Toll-Free Technical Support
- 7-Day Lowest Price Guarantee and Return Policy

Best models, best quality at a price savings of a standing overtime. Call today for latest models.

IBM®

IBM Business Partner — Authorized Personal Computer Dealer

ThinkPad® 760EL and 760ELD

Processor	Screen	RAM/HD	Price
Pentium 100	11.3" Dual Scan	B/B10MB	$3399
Pentium 100	12.1" Active SVGA	B/B10MB	4499*
Pentium 120	11.3" Dual Scan	B/B10MB	3599
Pentium 120	12.1" Active SVGA	BMB/1.0BGB	4799
Pentium 133	12.1" Active SVGA	16MB/1.0BGB	5499

* Includes built-in 4X CD-ROM drive

ThinkPad® 760E and 760ED

Processor	Screen	RAM/HD	Price
Pentium 120	12.1" Active SVGA	B/810MB	$4999
Pentium 120	12.1" Active SVGA	BMB/1.2GB	5199
Pentium 133	12.1" Active SVGA	16MB/1.0BGB	5999
Pentium 133	12.1" Active SVGA	16MB/1.2GB	6999*

* Includes built-in 4X CD-ROM drive

All New 365X Models. Call for details.

ThinkPad® 760L and 760LD
- 10.4" Active display
- 32-bit accelerated Local bus video
- Built-in sound card, speakers & microphone
- 256KB Level 2 cache
- Tilting keyboard with palm rest

Processor	Screen	RAM/HD	Price
Pentium 90	10.4" Active	B/B10MB	$4249
Pentium 90	10.4" Active	8/B10MB	4549*

* Includes built-in 4X CD-ROM drive
Windows 95 models also available.

ThinkPad® 760LD

Just Announced! ThinkPad® 560. 12.1" Active Display, just 4.1 lbs.

NEC

NEC Versa 2205

Processor	Screen	RAM/HD	Price
Pentium 75	9.5" Active	B/B10MB	$2499

NEC Versa 550D

Processor	Screen	RAM/HD	Price
5x86/100	10.4" Dual Scan	B/540MB	$1699

NEC 4000

NEC Versa 4000
- Built-in 4X CD-ROM Drive! (selected models)
- Up to 120MHz Pentium processors
- 256KB Level 2 cache to optimize performance
- Unbelievable display – 65K color Dual Scan, 16.8 million color Active (High resolution 800x600 Active Matrix displays available)
- Built-in 16-bit sound, microphone, MIDI and 2 built-in speakers
- Multimedia docking station with outstanding Altec Lansing 4 speaker array (optional accessory, priced separately)

Built-In CD-ROM 4X Speed

Processor	Screen	RAM/HD	Price
Pentium 75	10.1" Active	8/B10MB	$3799*
Pentium 90	10.4" High Res.	B/B10MB	4099
Pentium 90	10.1" Active	B/B10MB	4349*
Pentium 120	10.4" High Res.	BMB/1GB	4399

* Features built-in 4X CD-ROM drive

© 1996 PCs Compleat. All prices and specifications subject to change and do not include shipping. All products or brand names are trademarks of their respective companies. PCs Compleat, 34 St. Martin Drive, Marlborough, MA 01752-3021. Phone (508) 624-6400. Not responsible for typographical errors. All trademarks and registered trademarks are the sole property of their respective owners. Lowest price guarantee applies to system purchases only. PCW 7/96

ONLY at PCs COMPLEAT ✓Lowest Price Guarantee ✓30-Day Money Back Guarantee ✓Free Tech Support ✓Free Software Installation ✓Free Configuration

COMPLEAT LINEUP

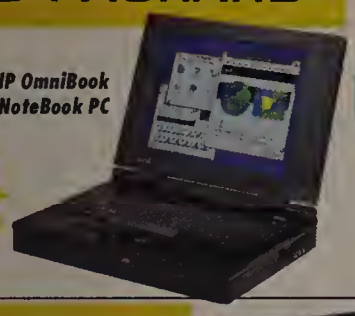
Call for a FREE PRODUCT GUIDE

PCs COMPLEAT

We carry a complete lineup of notebook & desktop upgrades and accessories

800-204-5507

HEWLETT PACKARD



HP OmniBook 5000 NoteBook PC

UP TO 120MHz PENTIUM with PCI BUS

HP OmniBook 5000

- Up to Pentium 120MHz with 32-bit PCI Local bus
- 1.2GB drives available for high capacity storage
- Super VGA-800x600 resolution (selected models)
- Built-in 16-bit sound, microphone & speaker

Processor	Screen	RAM/HD	Price
Pentium 90	10.4" Active	8/810M8	$ 4079
Pentium 90	10.4" Active	8M8/1.2G8	4449
Pentium 90	10.4" Active SVGA	16M8/1.2G8	4709
Pentium 120	10.4" Active SVGA	16M8/1.2G8	4939

HP OmniBook 5500

- Up to133MHz Pentium with 32-bit PCI Local bus
- 10.4" or 12.1" Active Matrix display with 65,000 colors
- Super VGA-800x600 resolution on notebook
- PCI Local bus Video, 1.5MB video memory
- 16-bit stereo sound with 2 speakers
- Optional 4X CD-ROM available

Processor	Screen	RAM/HD	Price
Pentium 120	10.4" Active SVGA	16M8/1.35G8	$5279
Pentium 133	12.1" Active SVGA	16M8/1.35G8	5999

UP TO 133MHz PENTIUM with PCI BUS

HP OmniBook 5500 NoteBook PC

Additional HP OmniBook models available! Call for details.

AST®

Authorized Reseller

$50 instant rebate on MS Office or Office Pro

Call for details

With purchase of AST Ascentia Notebook or Bravo MS or LC Desktop

Built-In CD-ROM

Ascentia P

AST Ascentia P

- Pentium 100MHz and 133MHz processors
- Standard SmartBay – swap 4X CD-ROM, 3.5" floppy or optional 2nd battery
- 11.3" Dual Scan & Active display with 800x600 resolution
- 800MB & 1.2GB removable hard drives
- Built-in SoundBlaster 16 Vibra chipset

Processor	Screen	RAM/HD	Price
Pentium 100	11.3" Dual Scan SVGA	8/800M8	$3299
Pentium 100	11.3" Dual Scan SVGA	8M8/1.2G8	3779
Pentium 133	11.3" Active SVGA	8/800M8	4249
Pentium 133	11.3" Active SVGA	8M8/1.2G8	4729

AST Ascentia J

- Integrated 14.4/14.4 Data/fax modem and audio
- PCI bus architecture with 256KB Level 2 cache
- 10.4" SVGA (800x600) resolution Dual Scan and Active displays

Processor	Screen	RAM/HD	Price
Pentium 75	10.4" Dual Scan SVGA	8/500M8	$2149
Pentium 100	10.4" Dual Scan SVGA	8/800M8	2639
Pentium 100	10.4" Active Matrix SVGA	8/800M8	2839
Pentium 133	10.4" Active Matrix SVGA	8/800M8	3299

AST, AST logo are trademarks of AST Research, Inc. All rights reserved.

COMPAQ

Contura 430

Processor	Screen	RAM/HD	Price
486DX4/100	10.4" Dual Scan	8/720M8	$2369
486DX4/100	10.4" Active	8/720M8	2869

LTE 5000 Series

- Up to 133MHz Pentium power with 256KB cache
- 32-bit PCI Local bus graphics
- 8MB or 16MB RAM exp. up to 72MB or 80MB (differs by model)
- Built-in 16-bit sound, microphone & 2 speakers
- MultiBay – holds CD-ROM, 2nd HDD, floppy or 2nd battery
- Up to 1.35GB hard drives
- Built-in infrared for wireless communications
- Supports NiMH batteries
- Optional MPEG and TV video adapter

New Models!

Processor	Screen	RAM/HD	Price
Pentium 75	10.4" Dual Scan	8/510MB	$2830
Pentium 75	11.3" Dual Scan	8/810M8	3210
Pentium 75	10.4" Active	8/810M8	3589
Pentium 90	10.4" Active	8/810M8	3970
Pentium 90	10.4" Active	8/810M8	4340*
Pentium 120	10.4" Active	8M8/1.35GB	4720
Pentium 120	11.3" Active SVGA	16M8/1.35G8	5099
Pentium 133	12.1" Active SVGA	16M8/1.35GB	5669

* Features 8uilt-in CD-ROM drive

Built-In CD-ROM on LTE 5200, optionol occessory on other LTE 5000 models.

LTE 5000

TEXAS INSTRUMENTS

Extensa 560/570CD & CDT

Processor	Screen	RAM/HD	Price
Pentium 75	10.4" Dual Scan	8/810M8	$2449
Pentium 75	10.4" Active	8MB/1.2G8	3419
Pentium 100	11.3" Dual Scan	8/810MB	2929
Pentium 100	10.4" Active	8MB/1.2G8	3909

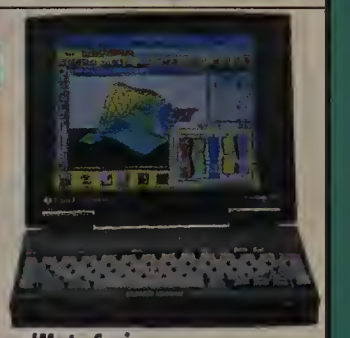
TravelMate 5130/5270/5300

- Pentium 90, 120 & 133MHz processors
- 10.4" & 11.3" SVGA, Active Matrix display
- Dual Lithium Ion batteries
- 32-bit PCI Local bus graphics
- 2MB video memory
- 256KB Level 2 cache
- 1280x1024 external monitor resolution
- 16-bit SoundBlaster compatible audio
- External PCI bus
- Windows 95 **AND** Windows for Workgroups

UP TO 133MHz PENTIUM

Processor	Screen	RAM/HD	Price
Pentium 90	10.4" Active SVGA	8MB/1.2GB	$3419
Pentium 120	11.3" Active SVGA	8MB/1.2G8	4099
Pentium 133	11.3" Active SVGA	8M8/1.2G8	4499

Ask about TravelMate 5270 & 5300 accessories promotion!



TravelMate Series
Product differs slightly from photo

HEWLETT PACKARD

SAVE 5%

HP DeskJet 340 Printer Bundle C2664A

1. DeskJet 340 printer
2. Color kit
3. Rechargeable battery

$309.99

SAVE 35%

DeskJet 320 Printer Bundle C2637A#ABA

1. DeskJet 320 printer
2. 60-page sheet feeder
3. Color Kit

$199.99

BIG SAVINGS ON HP PRINTER BUNDLES

HP LaserJet Printers

HP LaserJet 5L printer (IBM, 4ppm, 600dpi) C3941A	$ 479.00
HP LaserJet 5P printer (IBM, 6ppm, 600dpi) C3150A	879.99

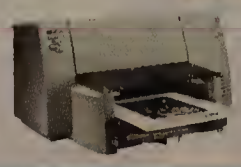
HP InkJet Printers

HP DeskJet 340 CV (bundle) C2664A	$309.99†
HP DeskJet 320 (bundle) C2637A#ABA	199.99†
HP DeskJet 600C printer C4547A	259.00†
HP DeskJet 660C printer C2164A	299.00†
HP DeskJet 660Cse printer C4548A	309.00*†
HP DeskJet 682C C4567A#ABA	329.00†
HP DeskJet 820Cse printer C4568A#ABA	399.00†
HP DeskJet 855C printer C4551A	449.00†
HP DeskJet 855Cse C4575A#ABA	499.00†
HP DeskJet 1600C printer C3540A	1349.99†

Home Office Products

HP OfficeJet LX C2891A	$ 599.99
HP FAX-700 C3530A	509.99

* Includes Family Font Package
† Includes HP Color Kit



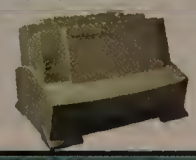
C4568A#ABA
HP DeskJet 820Cse

Hewlett-Packard Scanners

HP ScanJet 4C scanner C2527B	$ 949.99
ScanJet 4P color scanner (C1137A#ABA)	499.00
HP ScanJet 4S portable scanner C1127A	319.00

HP Tape Drives

HP T1000 (internal) C4320RB	$ 169.00
HP T1000e (portable) C4326RB	219.99
HP SureStore, 2GB, DAT, Int C1525E	899.99
HP SureStore, 8GB, DAT, Ext C1529E	1220.00



C3941A
HP LaserJet 5L

More Brand Names, Peripherals and Software available. If you don't see it, CALL!

International: 508-624-6400
Email: sales@pcscompleat.com
Visit us at www.pcscompleat.com
Open 24 Hours weekdays. 8am–8pm weekends.

800-204-5507

Circle 129 on reader service card

MIDWEST COMPUTER WORKS

YOUR COMPLETE

✔ Wide Selection ✔ Knowledgeable Sales Staff ✔ On-Time Delivery

5 Star Highlights

"Wide selection and quick delivery are this company's stock and trade."
PC Computing Magazine

1 HIGHLY TRAINED SALES TEAM!
Let our professional sales team help you with all your computer needs. All of our representatives are technically trained to service you better.

2 SATISFACTION GUARANTEED!
Here at Midwest Computer Works we're dedicated to delivering nothing but the finest name brand computer equipment at the lowest possible prices. A No-Hassle Money Back Guarantee lets you know that no sale is complete until YOU'RE satisfied.

3 INCREDIBLE SELECTION!
With over 30,000 different items from cables to computers, you can be sure that what you want is IN-STOCK and ready for immediate delivery.

4 LOWEST PRICES!
Our tremendous buying power means savings to you on all major brand computers, software and peripherals, simply put, we save you money without sacrificing service!

5 EASY PAYMENT TERMS!
We accept all major credit cards, COD's, purchase orders, pre-payments and offer flexible leasing options.

OVERNIGHT SHIPPING

FedEx FREE

Superchorge your computer's performonce with RAM upgrodes. If you don't see your system listed, coll todoy. We offer hundreds of upgrodes for PC computers, loptops, portobles, printers ond more.

Partial memory deals* - simple TECHNOLOGY · LIFETIME WARRANTY

AST COMPUTER
Ascentia 900N, 910N .....4MB ...$175
Ascentia 900N, 910N .....8MB ...$350
Ascentia 900N, 910N .....16MB ..$625
Ascentia 950N .....8MB ...$275
Ascentia 950N .....16MB ..$625

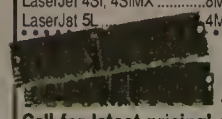
COMPAQ
Contura 400CX, 410CX .....4MB ...$175
Contura 400CX, 410CX .....8MB ...$299
Contura LTE Elite .....4MB ...$195
Contura LTE Elite .....8MB ...$365
Contura LTE Elite .....16MB ..$630
Contura LTE 5000 .....8MB ...$252
Contura LTE 5000 .....16MB ..$599

HEWLETT PACKARD
LaserJet 4P,4MV, 4V, 5P, 5MP .4MB $89
LaserJet 4P, 4MV, 4V, 5P, 5MP.8MB ...$160
LaserJet 4Si, 4SiMX .....4MB ...$118
LaserJet 4Si, 4SiMX .....8MB ...$220
LaserJet 5L .....4MB ...$149
LaserJet 5L .....8MB $325
LaserJet 5P, 5MP .....16MB...$299

IBM
ThinkPad 701C, CS .....8MB ..$369
ThinkPad 755 .....4MB ..$209
ThinkPad 755, 760 .....8MB ..$275
ThinkPad 760 .....16MB .$599

NEC
Versa E, V, M, P Series .....4MB ..$175
Versa E, V, M, P Series .....8MB ..$345

TOSHIBA
T2100, 2105, 2110, 2130...4MB ..$169
T2100, 2105, 2110, 2130...8MB ..$309
T2100, 2105, 2110, 2130..16MB .$625
T400, T410, 601 .....8MB ..$399
Tecra .....8MB ..$459
T2400/CS, /CT, T3400 .....8MB ..$359



SIMM Modules - IN STOCK -
• 1MB or 4MB x9 70 • 2MBx32 or 36 70
• 1MBx32 or 36 70 • 4MBx32 or 36 70
Call for latest pricing!
* All memory prices subject to change due to the volatile nature of the market.

LOWEST INDUSTRY PRICING AVAILABLE!

24-Hour FAX Line 1-847-459-6933
International Line 1-847-459-6884
Customer Service 1-847-459-9410
Technical Support 1-847-459-9411

ORDER DEPARTMENT
1-800-659-6757

DESKTOPS

Wyse Terminals .....ALL MODELS IN STOCK

AST
Bravo MS P-100 1.2GB 16M 1629
Bravo MS P-120 1.6G 16M 1785
Bravo MS P-166 1.6G 16M 2299

Canon
9140 P-100 1.275G 8M 6X-CD 14.4FAX....1469
9150 P-100 1.275G 8M 4X-CDw/Changer 28.8..1675
9330 P-133 1.6G 16M 6X-CD 28.8.....2260

COMPAQ
COMPAQ AUTHORIZED SERVICE CENTER
ProLinea E Pentium 75 1.06G 8M 1449
ProLinea E Pentium 100 630M 8M 1449
ProLinea E Pentium 100 1.06G 8M 1572
ProLinea E Pentium 120 1.06G 8M 1695
ProLinea E Pent. Pro 150, 1.08G 16M 4XCD...4092
ProLinea E Pent. Pro 180 16M 4xCD 4199
ProLinea Mini-Towers . *"New Models In Stock"*
Deskpro 5150 P-150 2G 16M 3280
Deskpro XL 5133ML P-133 1.05G 16M ..3569
PROLIANT 1500, 4500 Series.....BEST PRICES
PROSIGNIA Series.....*In Stock*.....BEST PRICES

IBM
PC330 P-100 540M 8M 1520
PC330 P-133 1.2GB 16M 2125
PC350 P-166 1.2G 16M 2889

NOTEBOOKS

AST
Ascentia 950N Pent. 90 1.2G 8M 10.4" Act ..2855
Ascentia 950N Pent. 120 1.2G 11.8" Act Clr .4775
Ascentia J Pent. 100 800M 10.4" Psv 144 S/R Fax ..2665
Ascentia J 30 P-100 8/800M 10.4" TFT 2809
Ascentia J 50 P-133 8/800M 10.4" TFT 3335
Ascentia P P-133 1.2G 8M 4xCD 11.3 Act....4769

Canon
Notejet IIICX P-90 810M 11.8" Act Clr.....5512
Notejet IIICX P-120 1.2GB 8M 11.8" Act ...6699

COMPAQ
Contura 420CX DX4/75 420M 10.4" Act Clr..2479
Contura 430CX DX4/100 720M Act Clr.....2872
Lte 5000 M510 P-75 510M 10.4" Psv Clr.....2859
Lte 5200 P-120 1.35G 10.4" Act Clr.....4769
Lte 5300 P-133 16M/1.35G 11.3" Act Clr.....5620

NEC
Versa 4050C P-90 810M w/CD 10.4" Actv Clr.4249
Versa 4080H P-120 1G 8M 4xCD 10.4" Act 4299

SHARP
CALL FOR OTHER 9000 SERIES MODELS!
PC-9070 P-133 1GB 8M 12.1" Actv Clr 5999

TEXAS INSTRUMENTS
Extensa 450T DX4/75 340M Act Clr.....1440
Extensa 560CD P-75 810M PCI 10.4" Psv 4xCD..2699
Extensa 550CDT P-75 524 10.4" Actv w/CD.....3545
TM5100 Pentium 90 1.2G PCI 10.5" Actv...3348
TM5300 Pentium 133 1.2GB 8M 11.3" TFT ..5299

MONITORS

Amdek 14" White VGA Monochrome ..119
Phillips Brilliance 15A w/Audio + mic .28 ..412
Samsung 17GLSI 17" 1600x1200 .26mm 835

GoldStar
1465DLS 14" 1024x768 .28mm.....249
1727 17" 1280x1024ni .28mm.....669

MITSUBISHI
Diamond Pro17HX 17" 1280x1024 .26mm .849
Diamond Pro21TX 21" 1600x1200 .30mm.1789
MegaView Series .....CALL

VISIONMASTER by iiyama
MF-8617E 17" 1280x1024 .26mm....739
MF-8221E 21" 1600x1200 .28mm.....1895
MT-9021E 21" 1600x1200 .30mm..1789

MAG INNOVISION
DX1595 15" 1280X1024 .28mm.....374
DX1795 17" 1280X1024 .26mm.....665
DX15T 15" 1280x1024 .25mm 417
DX17T 17" 1280x1024 .25mm 759

MAGNAVOX
7BM749 14" VGA Mono 720x400 109
CM2099 14" VGA 1024x768.28mm 245
CM2015 15" EVGA 1024x768 .28mm ..320
CM4018 17" Autoscan 1280x1024 .28mm...595
20CM64 20" Autoscan 1280x1024 .31mm 999

NANAO
F2-15 15" .28mm 1280x1024 TCO.....585
F2-17 17" .28mm 1280x1024 865
F2-17EX 17" .26mm 1600x1200 TCO ...975
T2-17TS 17" .25mm 1600x1200 TCO .1039
T2-17 .25mm 1280x1024 TCO 1059
T2-20 20" .30mm 1280x1024 TCO 1799

NEC
XV15+ / XV17+ .....469 / 799
XE21 1765
XP17 / XP21 .....1020/2130
C500 15" .28 PnP 1280x1024 375
M500 15" .25 1280x1024.....569
M700 17" .25 1280x1024.....845

NOKIA
449E 15" 1280x768 .28mm 449
447L 17" 1280x1024 .28mm MPRII 689
447X 17" 1600x1200 .25mm MPRII.....929
445X 21" 1600x1200 .25mm MPRII...1899

SONY
CPD-15SX1 15" 1280x1024 .25mm.....409
CPD-15SF2 15" 1280x1024 .25mm.....469
CPD-17SF2 17" 1280x1024 .25mm.....849
CPD-20SF2 20" 1280x1024 .25mm 1749
GDM-17SE2T 17" 1600x1200 .25mm ..1049

ViewSonic
V15ES 15" 1024X768 .28mm.....379
V17EA 17" 1024x768 .27mm 649
V21PS 20" 1600X1280 .25mm.....CALL

PRINTERS

Canon
BJ-10SX 212
BJ-30 / BJC-70 .....255/349
BJC-210.....360dpi 199
BJC-4100....720x360dpi Color ...299
BJC-610.....720dpi Color 429
LBP-1260 12ppm 600dpi 1349

EPSON
LQ1070+ / LQ2170 .....384/526
Stylus 1000 474
Stylus IIs*/Stylus Color II* 212/305
Stylus Pro XL (12.5"x18") 1789
* - Includes $30 Manufacturer Rebate, exp. Aug. 31

FARGO
Fotofun 3x5 color printer.....425
Primera Pro.....1339
Primera Pro Postscript w/ Photoshop.1849

HEWLETT PACKARD
DeskJet 600 Mono / DeskJet 660C..200/343
DeskJet 680C / DeskJet 850C ...315/453
DeskJet 820 / DeskJet 855 .....385/505
DeskJet 1600C/DeskJet 1600CM ..1299/1969
LaserJet 4+ 12ppm 600dpi 1399
LaserJet 4M+ 12ppm 600dpi 1935
LaserJet 4V 16ppm 600dpi.*11x17* .1915
LaserJet 4MV 16ppm 600dpi.*11x17* .2772
LaserJet 5LFS 16ppm 600dpi 489
LaserJet 5P 6ppm 600dpi 845
LaserJet 5MP 6ppm 600dpi Pstscrpt 999
LaserJet 5M.....NEW.....1769
LaserJet 5N, 12ppm 600dpi, e-net.....1529
LaserJet 5SI 24ppm 2779
LaserJet 5SIMX 17ppm 600dpi 3892
Color LaserJet 5.....NEW.....5915
OfficeJet LX *(Printer, FAX & Copier)*.....689
Copyjet Color Inkjet 2339
SEE PACIFIC DATA FOR JETDIRECT SAVINGS!

LEXMARK
Optra E 6ppm 1MB 600dpi.....549
Optra R+ 12ppm 2MB 1200dpi ...1419
Optra LXI+ 16ppm 8MB 1200dpi .2625

OKIDATA
184 Turbo 225
320 / 321 .....315/442
520 / 521 .....379/489
590+ / 591+ 439/599
395 / 395c 999/1099
600e/610e/610ePS 399/489/699
Laser 810 LED 8ppm/1200 ...759/1099
OkiJet 2010.....COLOR!!! 325

Panasonic
KXP-3626 / KXP-3696 .....409/449
KXP-6500 / KXP-6500 .....429/CALL

QMS
MagiColor Laser CX 5383

SEIKO SII
Smart Label EZ30 139

DRIVES

CD-ROM DRIVES

Goldstar GCDR560B 6X CD EIDE 109
Chinon CDS-545I 4x 230ms EIDE int....92
Microsolutions 4X Par Port 269
NEC 6XI / 6XE 244/342
NEC 4x4 CD Changer EIDE 265
Panasonic KXLD-740 2 PCMCIA.....399
Pioneer DRM 624X 6 Disk Changer ...284

PINNACLE MICRO
Pinnacle Micro Rec. CD-ROM ext. 1339
Pinnacle Micro RCD-1000 PCI int. kit.1172

PLEXTOR
Plextor 4Plex 4x 170ms SCSI-2 int. 260
Plextor 4Plex + 4x ext. w/o cntr PnP ...340
Plextor 6Plex 6x 145ms SCSI-2 int 299

SONY
CSD-760E 4x ATAPI int kit (150KB/sec Tran)....99
CSD-760S 4x SCSI-2 int kit (150KB/sec Tran) .149
PRD-150 Discman 2x port. kit.....332
PRD-155SB Discman w/16-bit Sound.559
Spressa - CSP920S Rec. CD int. 933
Spressa -CSP9211S Rec. CD ext. 1159

TOSHIBA
Toshiba XM3701BS SCSI int.....249
Toshiba TXM3701D1 6.7X ext.....329
Toshiba XM5302B 4X w/ATAPI int.....192

REMOVABLE STORAGE

IOMega Ditto 800 800MB parallel.....145
IOMega Ditto 3200 3.2G int. Travan..232
IOMega Ditto 3200 3.2G Parallel.....289
IOMega Zip Drive - IN STOCK - 199
IOMega Jaz 1.GB int. 475
Panasonic LF 7304 1.5GB int.....2129
Pinnacle Micro Tahoe 230M int. kit....675
Pinnacle Micro Sierra 1.3GB PC int..1365
Syquest EZ135 int. 185
Syquest 200MB Value kit int.....599

HARD & FLOPPY DRIVES

Fireball 1280 1.28G FATA 229
Maxtor 71626AP 1.6G EIDE 279
Microsolutions Par. Port Floppy 155
Microsolutions Backpack 1.2G Par....439
Quantum Bigfoot 1.28G FATA 227
Quantum QM34300 4.2GB SCSI.....999
Seagate ST5108A 1GB ATA 225 ...219
Seagate ST3630A 630M ATA 189
Sony 1.44MB 3.5" Floppy 39
Teac FD505 Dual Floppy 95

CONNER
CFS850A 850M IDE 204
CFS1275A 1.2GB IDE 235
CFP1080S 1.08GB SCSI 289

MICROPOLIS
4221 2.1GB SCSI 652
1991W 9.09 Wide 2199

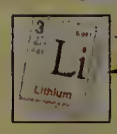
WESTERN DIGITAL
AC2635 635M EIDE 185
AC31600 1.6GB EIDE 295

TOSHIBA Tecra 720CDT

intel inside

P-133MHz, 12.1" Active Color & a Built-in 28.8Kbps Data/Fax Modem!

- Pentium® 133MHz Processor
- 12.1" Active 64K Color Display
- 16MB EDO RAM, exp.to 40MB
- 1.2GB HDD
- 6X CD-ROM Drive INCLUDED!
- Built-in 28.8Kbps Data/Fax Modem
- 2-4 hours Lithium Ion Battery
- 16-bit Sound Blaster Pro Compatible Sound System w/ .WAV & MIDI
- ZV Port Architecture & 64-bit HiQ Video for Advanced Multimedia
- Built-in Stereo Speakers & Audio Jacks
- PC Card Slots, 2 Type II or 1 Type III
- AccuPoint pointing device
- IrDA-complaint Infrared Port
- Win® 95 or Win® for Workgroups



Lease for as low as $189 a month

SATELLITE SERIES
T100CS Pentium 75MHz 504M 8M 10.4" Active Color, Integrated AC Adapter ..1929

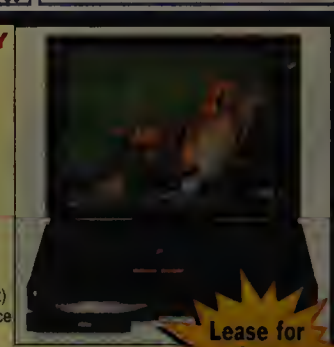
SATELLITE PRO SERIES
T410CS Pentium-90 810M 8M 10.4" Dual Scan (optional 4xCD).....3099
T410CDT Pentium-90 810M 8M 4xCD11.3" Active Color 4289

PORTEGE SERIES
T610CT Pentium-90 720M 8M 9.5" Active Color 3849

NEW!! TECRA SERIES
TECRA 700 CS Pentium-120 1.13G 8M 11.3" Dual Scan.....4529
TECRA 700 CT Pentium-120 1.13G 16M 11.3" Actv Color 4879
TECRA 710CDT Pentium 133 1.2G 16M 6xCD 12.1 Active Color 5749
TECRA 720CDT Pentium 133 1.2G 16M 6xCD 12.1 Active (PICTURED ABOVE) 6142

Call for other docking stations and other Toshiba accessories!

THE BIGGEST DISPLAY YOU'LL FIND!! IBM ThinkPad 760CD



- Intel Pentium 90MHz Processor
- Active Color, 12.1" Display
- 8M RAM, 1M VRAM
- 1.2GB Hard Drive
- Quad-speed CD-ROM Drive
- 3.1-9.0-hr. Li-ion Battery (dual support)
- Advanced TrackPoint III pointing device
- PCMCIA, Type I/II or one Type III
- Video Capture & MPEG 2 Playback
- 28.8 Data/Fax Modem w/voice-over
- 16-bit Stereo Wavetable Audio with Sound Blaster Support, mic and volume control

Lease for as low as $239 a month

Technical Excellence Award Winner! PC Magazine 12/95

Choose your operating systems - Windows '95, Windows 3.11 or OS/2 Warp Preloaded personal productivity software.

12.1" ACTIVE COLOR

ThinkPad Series (partial listings)
ThinkPad 365X P-100 810M 8M 10.4" Dual Scan Color.....NEW!! 2483
ThinkPad 365ED P-100 540M 8M 10.4" Dual Scan Color, 4xCD.....NEW!! 2483
ThinkPad 760C P-120 720M 8M 12.1" TFT Color 5565
ThinkPad 760CD P-120 1.2G 8M 4xCD 12.1" Active Color (PICTURED ABOVE) ... 6672
ThinkPad 760L P-90 810M 8M 10.4" Active Color 4150
ThinkPad 760LD P-90 810M 8M 10.4" Active Color 4485
ThinkPad 760ED P-133 1.2GB 18M 12.1" Active Color, 4xCD, MPEG 6954
ThinkPad 760EL P-133 1.08GB 16M 12.1" Active Color.....EW!! 5465

THINKPAD Accessories
Port Replicator for 360,750 & 755 Series 110
Car Battery Adapter for 720,755, 750 & 355 Series 120
Worldwide AC Adapter (50W) for 750,755 & 355 Series 139
Lithium Ion Battery II for 755 Series 269

Call for other ThinkPad models, docking stations and other accessories!

Policy Information
• Personal and company checks will delay orders 2 weeks • No surcharge for credit cards • All prices subject to change • Orders outside the USA require payment by wire transfer or American Express credit card • We check for stolen credit cards • All returns for credit, repair or exchange must have a return authorization number issued by our customer service department • All returned merchandise must in good condition and shipped to our main warehouse located at: 180 Lexington Drive, Buffalo Grove, IL 60089

Easy Payment Methods!
• Leasing Available • Purchase orders accepted from educational institutions, federal & state agencies and approved corporations. • C.O.D's welcome.

DHL FedEx

FAST SHIPPING, NO PROBLEM! WE DELIVER WHEN YOU NEED IT.

COMPUTER SOURCE!

Computer Shopper Best Buy of 1995

✔ Top Name Brands ✔ Quality Products ✔ Comprehensive Technical Support

NETWORKING

3Com

3C509B Etherlink III ISA coax 109
3C509B Etherlink III ISA coax. (5-pack)..CALL
3C509BTP Etherlink III ISA 10BT 102
3C509BTPO Etherlink III ISA 10BT (5-pack)..412
3C509BTP Etherlink III 20 or 60-packs SAVE $$
3C509B Combo Etherlink III ISA coax & 10BT .119
3C509B Combo 5, 20 & 60-packs. ....SAVE $$
3C579 Etherlink III EISA coax or 10BT ..226
3C590TPO Etherlink III PCI 10BT....122
3C595TX Fast Etherlink PCI 10/100BT..159
3C161B0 Linkbuilder B-Port Hub 1B9
3C16170 Linkbuilder 12-port Hub ...318

ARTISOFT

Lantastic Ugrade V1.0 Win 95 CD......75
Lantastic V1.0 WIN 95 CD B9
Lantastic V1.0 Win 95 Starter Kit......259
Lantastic V6.0 1-user/5-user.....74/CALL
Lantastic V6.0 Network Starter Kit. ...219
Noderunner/SI 2000 coax /10BT ...78/71

Digi

ALL MODELS IN STOCK.......CALL TODAY!

intel

EtherExpress 16C combo 118
EtherExpress Pro 10+ combo 113
EtherExpress Pro 10/100 PCI 209
EtherExpress Flash 32 EISA combo 215
EtherExpress Pro 10 Combo 5Pk....465
Netport Express Ethernet....373
TokenExpress Pro....240

LINKSYS

Combo **PCMCIA** Ethernet Card 129
Combo Ethernet Adapt 6-pack 239
Combo Ether 16 LAN Card 45
10BT 16-Port Hub 275
100B-TX 12-Port Hub....1119

LITEON

LiteLink 10 ISA PnP, 10B-T 10B-2 45
LiteLink 10D PCI Ethemet Adapter 65
LiteLink 10 PCMCIA Adapter 115
LiteSpeed 100D PCI Ethernet Adapter ..119
LiteSpeed 100BT Eternet 12-Port Hub...998

MICRODYNE

NE2000+ 10BT/COAX 75/75
NE2000+..20 and 100-packs ......SAVE BIG $$
NE4200 **PCMCIA** 10BT or COAX.....157

PACIFIC DATA PRODUCTS

DirectNet 10BT Print Server for HP LaserJet 4...279
DirectNet EX external print server....315

SMC

Arcnet PC130 / PC270E....72/98
Arcnet PC600 Workstation....119
Arcnet Hubs 8-port active 219
Elite16C Ultra Ethemet COMBO coax & 10BT 102
Elite16 Ultra Ethemet..6, 24 and 50-packs ....SAVE $$
Etherpower 10/100 PCI 10BT....139
Tigerhub TP6 10BT Hub (6-port)....162

THOMAS•CONRAD CORPORATION by COMPAQ

TC3045-CX 100mbps ISA coax 439
TC3045-UTP 100mbps ISA UTP RJ45 325
TC3047-UTP 100mbps EISA UTP RJ45....385
TC4141 Token Ring 16/4mbs **PCMCIA** 345
TC5048-T Ethernel PCI 10BT 123
TC5143-T Ethemet ISA 10BT 71

TRENDWARE

TE-16 XP/T 16-bit XPress RJ45 ISA....42
TE-16XP/CT 16-bit Xpress Combo ISA 45
TE-16PnP Plug-n-Play Combo ISA....57
TE-200CT PCMCIA II Combo RJ45....119

Xircom

Creditcard IIPS Ethernet 10BT....132
Creditcard IIPS Ethemet COMBO 10BT & coax...178
Creditcard IIPS Ethernet token ring....375
Creditcard Ethemet 10BT & 14.4 Modem ..262
Pocket Ethernet III.....Coax or 10BT....259
Pocket Ethernet Print Server..Coax or 10BT .245
Pocket Token Ring III....445

NOVELL

NetWare SFT III 3.11...BEST PRICES.....CALL
NetWare 3.12 5-user....579
NetWare 3.12 10-user....1209
NetWare 3.12 25-user. 1709
NetWare 3.12 50-user....2199
NetWare 3.12 100-user....3225
NetWare 3.12 250-user....4679
NetWare 4.1 5-user....579
NetWare 4.1 10-user....1279
NetWare 4.1 25-user....1B69
NetWare 4.1 50-user....2229
NetWare 4.1 100-user....3379
NetWare 4.1 250-user ....LOW
NetWare 4.1 500-user....PRICE
NetWare 4.1 1000-user.........LEADER!

FREE SHIPPING WITH ALL NETWARE UPGRADES!

MULTIMEDIA

"My favorite vendor for multimedia components..."
COMPUTER SHOPPER SMART SHOPPER August 1995

MULTIMEDIA KITS

Reveal Ouad K4X20 299
Turtle Beach 4X Kit - sound, +50 titles ...179
Turtle Beach 8X Kit - sound, +50 titles ...369

CREATIVE

Value CD 4X PnP 229
Blaster CD 4X/6X/8X........120/185/229
Discovery CD 16 4X int. PnP.........272
Discovery 8X 349
Performance 6X/BX 379/399

DIAMOND

Diamond 4400 199
Diamond Ultra 8000 8x 325

VIDEO CAPTURE

AlTech Pro PC TV Plus 145
AlTech Wavewatcher/TV2....2B0
ATI Video Basic 179
Intel Smart VideoPro 398
PictureTel Live PCS50 w/headset ISA .2599
TrueVision 2000 Series ....CALL
TrueVision Targa+ 16 1069
Sigma Reel Magic VGA MPEG 279

ADS Advanced Digital Systems

TV Elite ext. w/**FREE** Wireless Mouse ..194
TV Superscan 2....299

CREATIVE

PhoneBlaster 14.4 int. S/R FAX E-mail ...175
Sharevision PC3000 w/ video....899
VideoBlaster SE100 full motion/still video ...229
VideoBlaster MP400 full screen/full motion.285

DIGITAL CAMERAS

Chinon ESC-3000 ....B29
Ouicktake 150 645

Kodak digital science

Kodak DC40....699
Kodak DC50....999

PC SPEAKERS

Panasonic EAB401P 45
NEC Audio Tower....69
LabTec 3210 20-watt....B9
Advent AV622....195
Reveal RS54B0 160-watt w/subwof 294

ALTEC LANSING

ACS53 System w/subwoofer 129
ACS300.1 System 165
ACS500 5-Channel Dolby Surround.299

SONY

SRS-PC50 5-watt B6
SRS-300D 10-watt w/15-watt subwoof ..162
SRS-D2KPC 20-watt w/subwoofer .135
SRS-D4KPC 30-watt w/subwoofer .209

YAMAHA

YST-M10H 10-watt....75
YST-SS510 System 45-watt w/sbwfr.179
YST-SS1010 45-watt w/sub 199

SOUND BOARDS

Reveal SoundFX Wave....122
Reveal WavExtreme 32 PnP ATAPI ..119
Roland Sound Canvas SC55MKII........5B9

CREATIVE

Sound Blaster Value Edition 55
Sound Blaster 16 Value IDE B9
Sound Blaster 32 IDE PnP....149
Sound Blaster 32 AWE PnP 219
Wave Blaster II Daughter Brd w/Game Pk..118

MediaTrix

mediaTrix AudioTrix-Pro 219

Turtle Beach

Audio Advantage PCMCIA 122
Wavetable 32 138
Turtle Beach Tropez + ...232

Wavjammer 16-bit **PCMCIA**....209
Multimedia Combo SCSI....409

PERIPHERALS

CONTROLLERS

Boca IDE 2-HDD, 2-FDD IDE002 29
DTC 2177 VLB EIDE Caching Kit....59

AdvanSys

AdvanSys ABP-542 SCSI-2 ISA PnP....135
AdvenSys ABP-940 SCSI-2 PCI PnP 160
AdvenSys ABP-842 SCSI-2 VLP PnP....169

adaptec

AHA-1522A Single SCSI-2 ISA 75
AHA-1542 SCSI-2 ISA w/Flop....199
AHA-2842 SCSI-2 VLB w/Flop....229
AHA-2742 SCSI-2 EISA w/Flop....295
AHA-2940 PCI SCSI Master....249
AHA-2940UW Ultra PCI 284

CPU UPGRADES

Cyrix

386 to 486 CPU Upgrades and Math Chips ...CALL

intel

Overdrive for 486 25Mhz to DX4/75 135
Overdrive for 486 to Pentium 63MHz 139
Overdrive for 486 to Pentium 83MHz 195
Overdrive Pentium-120/Pentium-133 356
Overdrive Pentium-150/Pentium-166.......430/599

TAPE BACKUPS

Conner Tapestor 420 / Tapestor 850 .135/209
Conner Tapestor Travan 800 internal.....149

COLORADO MEMORY SYSTEMS INC.

Jumbo 350/1400....102/225
Trakker 350....155
Powertape 1GB/ 2GB / 4GB int 639/937/1153

SCANNERS

AGFA Arcus II 1849

LARGE FORMAT SCANNERS

Calcomp ScanPlus III E-Size 36x72 ....CALL
Umax Mirage D-16L B-size w/ Trans Adapter.6895

Artec

ViewScan Grayscale Handheld 400dpi....49
ViewScan A2000D Color Handheld 600dpi.....119
ViewStation AT3 Color 1-Pass 2400dpi 349
ViewStation A6000C+ Color 1-Pass 2400dpi..369

HEWLETT PACKARD

ScanJet 4S / ScanJet 4C/ ScanJet 4P ..297/511/935

MICROTEK

PageWiz..Compact 300dpi, Parallel 188
ScanMaker E3 w/Imagestar NEW!! 24-bit Color...369
ScanMaker E6 Series....558

Nikon

Cool Scan LS-10 PC ext. 1350
Cool Scan LS-20............NEW!!......1054/1199
Scantouch AX-1200 flatbed...2400 dpl 1019

Polaroid

Sprint Scan 35/ES....FILM SCANNER......1538

UMAX

Scanthis Handheld Scanner....CALL
PageOffice 299
Vista S6E 600dpi w/SOHO Bundle....399
Vista S6 600dpi w/Photoshop LE, OCR.....469
Vista S12 600X1200dpi, w/Photoshop LE ..775
Powerlook Pro 2400dpi w/Phtshp, KAIS & Trans. ...1847
Powerlook II w/Transparency Adapter 2299
Mirage D-16L B-size w/ Trans Adapter.....6895

PLOTTERS

Calcomp Designmate 3024M 1599
HEWLETT PACKARD....ALL MODELS
Hewlett Packard DesignJet 230 D-size 1999
Summagraphics..........*ALL MODELS AVAILABLE*

DIGITIZERS

Calcomp Drawing Slate 12x12 16btn 209
Summasketch III 12x12 any cursor 239
Wacom Artpad II 4x5 w/ Dabbler 149
Wacom Artz II 12x12 Cordless 409
Wacom ArtZ 6x8 Cordless....299

VIDEO BOARDS

Hercules Stingray Pro 1MB PCI or VLB 87
Hercules Terminator 64 2MB VLB/PCI....145
Hercules Dynamite Power 2M VLB....129
Matrox Millennium 3D PCI 2M 309
Matrox Millennium 3D PCI 4M 439
Number 9 9FX Motion 771 PCI or VLB 2M VRAM 289

ATI

Graphics XPression ... .PCI......1MB.........110
Graphics XPression ....ISA......1MB.........123
Graphics XPression ....VLB.....1MB.........120
Graphics Pro Turbo 2MB PCI....254
Graphics Pro Turbo 2M / 4M (VLB) 216/359
WinTurbo 2M VLB/PCI/ISA....229
XClaim PCI 2M or 4M 266/409

DIAMOND

Speedstar 64 2120/2200 ....118/409
Stealth 64 Video 3240XL VRAM 2M....335
Edge 3D 2120XL PCI....237
Stealth 64 Video 3200 PCI 2M 254

MODEMS

CISCO SYSTEMS....Call for listings!
Boca Express 14.4 w/Fax int. w/software....79
Boca 14.4 Multimedia Voice w/voice view....79
Boca 28.8 V.34 int./ext/ 157/205
Microcom TravelCard & Deskporte.all models....CALL
Multitech 1932ZDX 19.2 w/fax ext. 117
Multitech MT2834ZPX 28.8 int....172
Practical PM144MT 14.4 Mini-Tower ext. 72
Practical V.34 PCMCIA EZPort 269
Prometheus Pro Voice Fax/Modem 14.4...59
Simple 14.4 Voice Data/FAX Modem....109
Telebit FastBlazer & NetBlazer series....CALL
Zoom 14.4 w/Fax int./ext. 65/93

Hayes

Accura 28.8 w/fax int. / ext. V.34 .....167/189
Optima 28.8 w/fax int. / ext. w/voice ..357/418
Optima 28.8 EZJack **PCMCIA** 279

Megahertz

XJII44 xJack 14.4 **PCMCIA** 93
XJ2288 xJack 28.8 **PCMCIA** V.34 239
EM1144T 14.4 **PCMCIA** 10BT Combo..139
XJack 28.8 Cellular w/XJack....254

U.S. Robotics

Sportster 28.8 Winmodem Internal 139
Sportster Voice 28.8 Faxmodem int........185
Sportster 14.4 w/fax int./ext. ....91 / 107
Sportster 28.8 V.34 int./ext. 163/179
Sportster **PCMCIA** 2.1 14.4 w/fax....95
Sportster **PCMCIA** 2.1 28.8 w/fax V.34 ..275
Sportster **ISDN** 128K 379

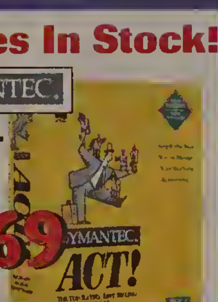
SOFTWARE

1000's of Titles In Stock!

Adobe

Adobe Illustrator 4.1 w/Streamline ...320
Adobe Photoshop 3.0.5....549
Adobe Pagemaker 6.0....569
Borland dBase III Plus....459
Borland Paradox 7.0....279
Caere Pagekeeper 2.0 85
Caere OmniPage Direct 2.0 59
Caere OmniPage Pro 6.0 474
Calera WordScan Plus 4.0 368
Corel SCSI 2.0 82
Corel DRAW! 5.0 *CD* 425
Corel CD Office Companion..New 95
CA BPI Accounting II 4.0 *DOS*....167
CA Clipper V5.3....149
DesignCAD 2D / 3D 162/242
Fractal Painter 4.0/Dabbler 2.0 ...337/42
Lotus 1-2-3 5.0 299
MacroMedia Director 4.0 829
Macromedia Freehand 5.5 379
Macromedia Extreme 3D CD 315
PerfectOffice/Upgrade....419/242
Perfect Office Pro 3.0....535
OuarkXPress 3.32....595
Symantec Act 2.0....169
WordPerfect 6.1 /Upgrade 191/250
WordPerfect Quattro Pro 6.0....250

SYMANTEC.



ACT 2.0 $169

TOP TITLES FOR WIN 95

1. Microsoft Windows 95 Upgrde CD....95
2. Softram....34
3. Microsoft Plus (Win 95 Companion)....45
4. Microsoft WordPerfect Upgrade 89
5. Norton Antivirus 72
6. Netscape Navigator Personal 39
7. McAfree Viruscan....42
B. Microhelp Uninstaller 39
9. CleanSweep 27
10. Microsoft Upgrade Office Pro CD .327
11. Quarterdec MagnaRam 2 239

CALL FOR A FREE CATALOG!

POWER PROTECTION

APC AMERICAN POWER CONVERSION

YOUR APC HEADQUARTERS!

UPS's STARTING AT $99

$25,000 Lifetime Equipment Protection on All UPS!

BACK-UPS PRO PnP SERIES

APC Introduces the world's ONLY Plug-and-Play UPS with PowerChute Win 95 Management Software!

Back-UPS Pro 280/420 ....143/237
Back-UPS Pro 650 289

BACK-UPS SERIES

The World's Best Value In Power Protection!

Back-UPS 280B/400B....99/145
Back-UPS 450/600....169/237
Back-UPS 900/1250....328/432

SMART-UPS VS SERIES

Includes PowerChute Power Management & Diagnostic Software for networks!

Smart-UPS 420 VS/650 VS 259/295
Smart-UPS 1000 VS/1400 VS 435/559

Microsoft SOLUTION PROVIDER *Safeguard your system!*

SMART-UPS SERIES

Performence Power Menegement for Advanced Buelness Networka!

Smart-UPS 450/700 ....275/338
Smart-UPS 1400/2200 ....594/1029
Smart-UPS 2000XL....1180

SURGE SUPPRESSORS

Protect Net Network Cable Protector 23
Personal SurgeArrest Strip 6', 7-outlets...19
Personal SurgeArrest 6', w/RJ11 25
Personal SurgeArrest 6', w/CATV 34

UPS MANAGEMENT SOFTWARE

PowerChute+ for Novell/Unix 69/99
PowerChute+ for Win/Win NT 59/69

THE WORLD'S ONLY PLUG-AND-PLAY UPS!

SONY

Multiscan 17sfII Trinitron Graphic Display

- 17" (16" viewable)
- .25mm Aperture Grille Pitch
- 1280x1024 Resolution
- On-screen Display Digital Controls

$849

U.S. Robotics The Intelligent Choice in Data Communications

Sportster Winmodem™ Internal 28.8 Faxmodem for Windows

- Max. throughput 115,200 bps
- High speed data: 28.8 Kbps (Upgradable to 33.6)
- Free fax & data software
- Internet Connection Kit
- High speed fax: V.17 Group III 14,4000 and 9600 bps Class 1 & Class 2.0 send and receive fax

5-Year Warranty! $139

FREE UPGRADE TO 33.6 Kbps!

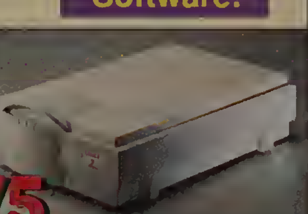
COLD CATHODE TUBE TECHNOLOGY!

UMAX Vista S12 Scanner

- 600x1200dpi Optical, 9600dpi max. resolution
- 1-pass, 36-bit color
- Bundled Software: Photoshop LE, Wordlinx 2.0 OCR, Corel Prof. Photos CD & SCSII II interface

Loaded with Software!

$775



NATIONAL DIRECT ORDER LINE

MIDWEST COMPUTER WORKS

180 Lexington Drive, Buffalo Grove, IL 60089

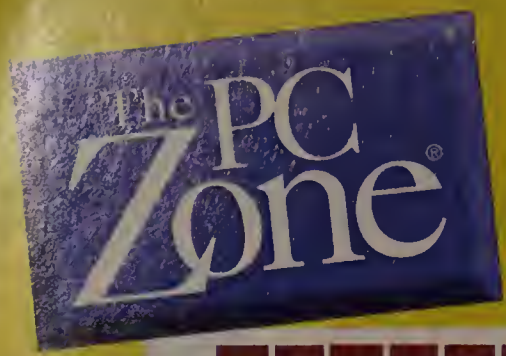
VISIT US ON THE WEB! http://www.mcworks.com

1-800-65-WORKS

(1-800-659-6757)

FAX 847-459-6933
Customer Service 847-459-9410

Circle 155 on reader service card



Call The PC Zone
For The Lowest Prices...

- Brand names. Discount prices!
- Over 20,000 products
- Great customer service

Check out our expanded line of Notebooks and Desktops and call us for all your *SOFTWARE* needs, too!

digital™

Hi-Note Ultra II
High-performance business partner!

- Up to 133MHz Intel Pentium® processor
- 8MB RAM standard, upgradable to 40MB
- 1.1GB and 1.4 GB hard drive
- 10.4" SVGA TFT screen
- 16 Bit sound, built-in stereo speakers & microphone
- Only 4lbs.

Processor	Hard Drive	Screen	Order #	Price
P100	1.1GB	10.4" SVGA TFT	#26891	$3845
Or LEASE monthly for as low as >>>>>> $154*				
P120	1.1GB	10.4" SVGA TFT	#26892	$4135
P133	1.4GB	10.4" SVGA TFT	#26893	$4520

Options & Accessories	Order #	Price
PNY 8MB Upgrade	#28394	$204.98

CTX
Making Technology Affordable

CTX EzBook Series
Performance, quality and value combined!

- Up to 90MHz Pentium® processor
- 8MB RAM standard
- Includes Windows 95 preloaded

Processor	Hard Drive	Screen	Order #	Price
P75	540MB	10.4" TFT	#32121†	$2299
Or LEASE monthly for as low as >>>>>>> $92*				
P75	810MB	10.4" TFT	#32122†•	$2599
P90	540MB	10.4" TFT	#32123▲	$2599
P90	810MB	10.4" TFT	#32124▲	$2699
P90	810MB	10.4" TFT	#32125▲•	$2999

†Includes 2X CD-ROM ▲Includes 4X CD-ROM •16MB RAM

Options & Accessories	Order #	Price
EzBook NiMH Battery Pack	#32131	$99.98
EzBook External Battery Charger	#32132	$49.98

TOSHIBA

Satellite 100CS
Pentium® processor-powered notebook for under $2000!

- 75MHz Intel Pentium® processor
- 8MB RAM
- Brilliant 10.4" color display
- NiMH battery pack and integrated AC adapter
- One-year warranty and 24-hour technical support

Processor	Hard Drive	Screen	Order #	Price
P75	504MB	10.4" DSCAN	#30717	$1968
Or LEASE monthly for as low as >>>>>>> $79*				

Options & Accessories	Order #	Price
Megahertz 28.8 PC Card Modem XJack	#32079	$269.98
PNY 8MB Upgrade	#28276	$214.98

HEWLETT® PACKARD
Authorized Reseller

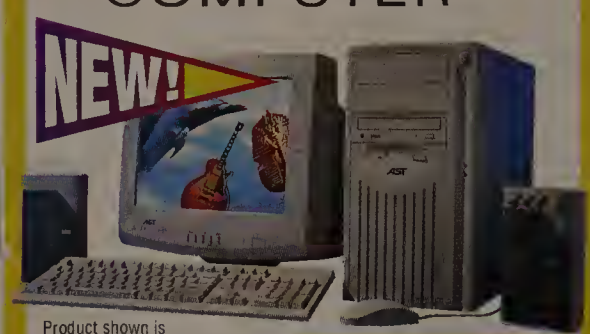
HP DeskJet 682C Printer
Fast, high-quality output in both color and black and white!

- Print speed: 4ppm (black 600x600dpi)
- 1ppm (color 300x300dpi)

Order #	Description	Price
#86325	HP DeskJet 682C Printer	$329.98
#86321	HP DeskJet 855Cse Printer	$499.98

Order #	Description	Price
#13695	HP High Capacity Black Ink	$24.98

AST COMPUTER



Product shown is representational only

Advantage 800 Series
Ultimate CPU speed!

ONLY $1449 Order #33563

- Up to 166MHz Intel Pentium® processor
- Up to 16MB RAM standard
- 28.8K bps data/fax/voice modem

Chassis	CPU	Hard Drive	Order #	Price
821 Minitower	P100	1.2GB	#33563▪	$1449
Or LEASE monthly for as low as				$58*
822 Minitower	P100	1.2GB	#33564▪•	$1649
823 Minitower	P133	1.6GB	#33565▪	$1999
824 Minitower	P133	1.6GB	#33566▪•	$2199
826 Minitower	P150	2.1GB	#33567▪•	$2339
828 Minitower	P166	2.1GB	#33568▪•	$2439

▪Includes 6X CD-ROM Drive •Includes 16MB RAM

UMAX®
The Magic of Color™

S12 includes Photoshop 3.0 LE and Wordlinx

ONLY $762.98 Order #30302

Vista-S12 LE2 Scanner
Affordable, high-quality scanner!

- Hardware resolution: 600x1200dpi
- Software resolution: 9600x9600dpi
- 24-bit color for over 16.7 million brilliant colors
- Cold cathode lamp for long life and low maintenance

Order #	Description	Price
#31806	Vista-S12 PC PRO2 Scanner	$898.98

Prices may drop quickly.
CALL FOR CURRENT PRICES!

All stocked items shipped same day.

Credit cards are not charged until the order is shipped. Most products ship the same day for overnight delivery. Packages shipped overnight at $7 for the first 7 pounds and $1 for each additional pound or via UPS ground. Call for international shipping rates. Packaging and handling $4 per order. Returns subject to a restocking fee. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors.
*Dana Commercial Credit Corp. Business Lease: 36 month, full-payout lease with a $1 purchase option based on approved credit. Other leasing options available. Call for full details.

Call Our Knowledgeable Sales Advisors!

© 1996 Copyright Multiple Zones International Inc. All rights reserved. Windows is a registered trademark of Microsoft Corp. Unauthorized duplication is a violation of applicable laws. Intel, Intel Inside and Pentium™ are registered trademarks of the Intel Corporation.

IBM NOVELL® Acer SONY® Packard Bell Canon

The PC Zone 1-800-258-8088

Your 24 Hour Computer Discount Catalog SuperStore™

If you don't see what you're looking for – *CALL!*

Visit us Online: CompuServe...GO MZ, Internet...http://www.internetMCI.com/marketplace/mzone

IBM Business Partner — Authorized Personal Computer Dealer

NEW!

intel inside pentium processor

AS LOW AS $3399

IBM ThinkPad 760 Series

CD-ROM versions shown

Pentium® processor-powered portables from IBM!

- Up to 133MHz Intel Pentium® processor
- 8MB RAM standard, upgradable to 40MB
- Up to 12.1" Active Matrix screen
- 28.8 data/fax modem included

Processor	Hard Drive	Screen	Order #	Price
P100	810MB	11.3" SVGA DSCAN	#33191	$3399
Or LEASE monthly for as low as >>>>>>				$136*
P100	810MB	12.1" SVGA TFT	#33193▲	$4499
P120	1.08GB	12.1" SVGA TFT	#33187	$4799
P133	1.2GB	12.1" SVGA TFT	#33501▲●	$6999

▲Includes 4X CD-ROM ●16MB RAM Standard

Options & Accessories	Order #	Price
Megahertz 28.8 PC Card Modem XJack	#32079	$269.98
8MB Upgrade	#28347	$349.98

Canon

ONLY $299.98 Order #25885

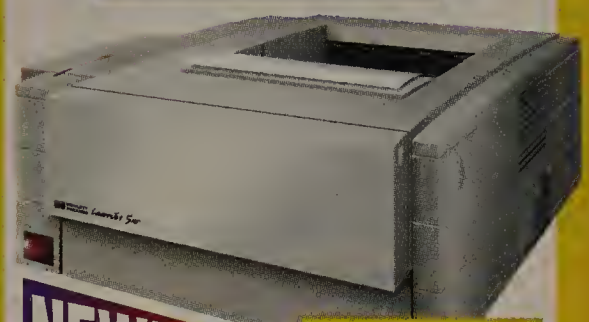
Canon BJC-4100 Color Printer

Prints 720x360 dpi color on plain paper!

- 720x360 dpi B&W and color printing
- Prints .8 pages per minute in color mode
- Includes Canon Creative Software

Order #	Description	Price
#25886	BJC-210 Color Printer	$198.98
#25883	BJC-610 Color Printer	$429.98
#21969	BJC-70 Portable Color Printer	$354.98

HEWLETT PACKARD Authorized Reseller



NEW!

ONLY $858.98 Order #23556

Hewlett-Packard LaserJet 5P Printer

Precision laser printing for the busy home office!

- 600x600 dpi resolution featuring REt and 120 levels of gray
- 4 ppm print speed
- Includes font management software

Order #	Description	Price
#23786	LaserJet 5MP Laser Printer	$1049.00

PNY — "The Memory Leader... Worldwide."

POWER UP WITH PNY MEMORY

Why PNY?

- Compatibility – The largest variety of laptop memory with GUARANTEED COMPATIBILITY!
- Toll-free tech support and fax back service 800-234-4597*
- Lifetime warranty on all products
- ISO9001 Quality registered ant netware approved

Is your system running slow? Does it take hours to open applications? You don't need a new computer, you just need more memory... the fastest way to open Windows 95!

*Visit our home page: http://www.pny.com

CALL FOR CURRENT PRICES!

Compaq Concerto 4/25, 4/33		
#28212	4MB	$149.98
#28213	8MB	$289.98
#28214	16MB	$469.98
IBM ThinkPad 701c, cs "Butterfly"		
#23166	4MB	$99.98
#23167	8MB	$189.98
#23168	16MB	$389.98
NEC Versa 2000D		
#28318	4MB	$99.98
#28319	8MB	$209.98
#28320	16MB	$399.98
Toshiba Tecra 700 Series		
#28341	8MB	$249.98
#28342	16MB	$449.98
Digital HiNote		
#28391	8MB Kit	$199.98
#28392	16MB Kit	$389.98

Please call for current pricing.
Call for additional product information and personalized assistance!

Quantum

AS LOW AS $229.98

NEW!

Quantum Bigfoot 1.2GB Hard Drives

Your best hard drive storage value!

- 1.2 and 2.5GB capacities – ideal for storage-intensive applications
- 5.25-inch ultra slim form-factor
- 15.5ms average seek time
- High-performance 16.6MB/sec. data transfers
- Fast ATA-2 interface
- Optimized CD caching

Plus...

- Easy-to-follow installation guide
- Pictorial *Fast Start* chart for advanced PC users
- IDE interface cable and mounting screws
- Norton Smart Doctor™ for Windows® 95 utility software
- Ontrack Disk Manager® software featuring *Quick* for fast, easy setup and installation
- Toll-free customer support hotline
- Three-year Quantum warranty

Quantum HDD	Formatted Capacity	Form/Height	Interface	Internal Data Transfer Rate	RPM	Drive Configuration	Order #	Price
Bigfoot 1.2GB	1286MB	5.25" ultra slim line	Fast ATA-2	48-89MB/sec.	3600	1 Platter/2 Heads	#33300	$229.98
Bigfoot 2.5GB	2577MB	5.25" ultra slim line	Fast ATA-2	48-89MB/sec.	3600	2 Platter/4 Heads	#33301	$399.98

The PC Zone 1-800-258-8088 NEC Microsoft® Lotus® TOSHIBA AST COMPUTER HEWLETT PACKARD Authorized Reseller TEXAS INSTRUMENTS

Visit us Online: CompuServe...GO MZ, Internet...http://www.internetMCI.com/marketplace/mzone

MasterCard VISA DISCOVER

NO SURCHARGE ON CREDIT CARDS

1•800•258•8088

Corporate, Education and Government bids welcome! Fax to 1-800-417-1993

YOUR SOURCE CODE PW607

Call for your FREE Catalog

Circle 161 on reader service card

DISCOVER FOR EVERY PC'S

COMPUTER DISCOUNT WAREHOUSE™

new!

Simple TECHNOLOGY

28.8 Communicator with SimpleJack

◆ Direct-connect in-line RJ-11 phone connector ◆ 28,800 bps (V.34 and V.FC) data ◆ 14,400 bps fax ◆ Cellular ready (with optional connector cord) ◆ MNP10-EC ◆ TX-CEL ◆ Voice recording (with integrated sound) ◆ Includes Cheyenne BitWare ◆ Windows® 95 approved ◆ PCMCIA Type II

$247.79 CDW 66869

28.8 Communicator **$172.46** CDW 56057

14.4 Communicator **$95.83** CDW 50919

3Com Fast EtherLink 10/100BASE-T adapters

◆ Parallel Tasking® architecture for superior performance ◆ Includes AutoLink™ auto-installation software ◆ Uses the same EtherDisk diagnostics and drivers as EtherLink III adapters ◆ Lifetime warranty

3C595-TX PCI ..... **$161.91** CDW 51830

3C595-TX-5PK PCI, 5 pack ..... **$684.95** CDW 52223

3C595-TX-20PK PCI, 20 pack ..... **$2419.12** CDW 56160

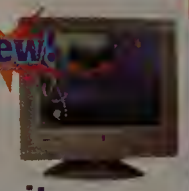
3C595-TX-60PK PCI, 60 pack ..... **$6768.49** CDW 64428

3C597-TX EISA ..... **$239.02** CDW 56937

3C597-TX-5PK EISA, 5 pack ..... **$1092.00** CDW 56939

ViewSonic®

new!



15GA PerfectSound Multimedia Monitor

See and hear the difference!™

◆ .27mm dot pitch ◆ Non-glare Super Contrast screen ◆ Maximum resolution 1,280 x 1,024; 1,024 x 768 at 86Hz ◆ OnView™ on-screen menu controls ◆ High fidelity dome speakers built into bezel ◆ Microphone, headphone jack and external microphone port ◆ Plug and Play compatible (requires DDC-compatible video card) ◆ Swedish TCO and MPR-II compliant ◆ 3-year limited warranty

15GA 15" CRT, 14" viewable area.... **$488.97** CDW 65206

17GA 17" CRT, 16" viewable area.... **$734.40** CDW 53826

WINDOWS® AND DOS SOFTWARE

Adobe PageMeker V6.0 WIN 545.78
Adobe PageMaker V6.0 WIN upg 132.81
Adobe Photoshop V3.0.5 WIN 545.78
Adobe Tripla Pley V3.0 WIN 606.16
Autodesk AutoCAD LT V2.0 WIN 394.43
Autodesk Generic CADD V6.1 DOS 62.36
Borlend C++ V4.5 CD 311.05
Borlend Turbo C++ V4.5 WIN CD 74.03

Approach 96 for Windows 95

3.5" **$93.15** CDW 61942
CD **$93.15** CDW 61943

Broderbund MYST CD 48.39
Broderbund Print Shop Deluxa II 71.74
Caere OmniPage Pro V6.0 WIN 449.29
Caera OmniPege Pro V6.0 WIN upg 114.20
Clear AllClear III 175.54
Compuserve SPRY Internet in e Box WIN V2.0 ..... 61.39
Connectix RAM Doubler for WIN 54.54
Corel Gallery 2 WIN CD 62.22
Corel Xere V1.0 WIN 185.04
CorelDRAW V3.0 WIN CD 62.39
CorelDRAW V4.0 to V5.0 WIN upg CD 167.90
CorelDRAW V4.0 WIN CD 94.27
Detastorm Procomm Plus V2.01 DOS 89.01
DaLorme Straat Atlas V3.0 WIN CD 63.10
Frectal Design Dabblar V2.0 WIN 42.15
Fractal Design Painter V4.0 WIN 331.95
Fractal Dasign Painter V4.0 WIN upg 114.98
IBM OS/2 Warp V3.0 CD 75.72
Inset Systems Hijaak Suite V1.0 WIN 83.59
Intuit QuickBooks V4.0 WIN 94.28
Intuit QuickBooks V4.0 WIN 94.28

Microsoft FrontPage V1.1 for Windows 95 new!

3.5" **$134.05** CDW 68349
License **$113.94** CDW 68352

Intuit Quickan Daluxa V5.0 WIN CD 59.99
Intuit Quicken V5.3 WIN 42.09
Lotus 1-2-3 V4.0 DOS 351.58
Lotus 1-2-3 V4.0 DOS upg 92.57
Lotus 1-2-3 V5.0 WIN 291.45
Lotus 1-2-3 V5.0 WIN upgrade 92.69
Lotus Approach V3.0 WIN 92.69
Lotus cc:Mail Desktop V2.2 WIN 62.47
Lotus cc:Mail Mobile V2.2 WIN 125.38
Lotus cc:Mail Router V5.1 ..... 62.47
Lotus Freelance V2.1 WIN 317.71
Lotus Organizer V2.1 WIN 89.25
Lotus Organizer V2.1 WIN vers upg 49.46
Lotus ScreenCem V2.0 WIN 89.23
Lotus SmartSuite V4.0 WIN 3.5 ..... 374.81
Lotus SmartSuite V4.0 WIN CD 377.34
Lotus SmartSuite V4.0 WIN upg 138.72
Lotus Word Pro 96 WIN 61.78
Macromadia Freehand V5.0 WIN CD 375.35
Methsoft MethCAD V6.0 WIN 102.37
McAfee VirusScan V2.0 WIN NT 44.46
McAfee VirusScan V2.2 DOS 44.17
McAfaa VirusScan V2.2 WIN 44.17
McAfee WebScen V1.0 ..... 31.14
Microhelp Uninsteller V3.0 WIN 34.15
Microsoft Accass V2.0 WIN 296.94
Microsoft Access V2.0 WIN dav kit 296.94
Microsoft Access V2.0 WIN upg 114.98
Microsoft Automap V4.0 WIN CD 38.32
Microsoft Encarta Encyclopedie 1996 WIN CD 44.94
Microsoft Excel V5.0 WIN 296.94
Microsoft Excel V5.0 WIN comp upg 114.98
Microsoft FoxPro PRO V3.0 WIN upg 259.08
Microsoft FoxPro PRO V3.0 WIN upg CD 265.72

Microsoft Intemet Informetion Server WIN NT 89.87
Microsoft MS-DOS V6.22 upg 49.05
Microsoft Oftica Pro V4.3 WIN 538.24
Microsoft Offica Pro V4.3 WIN 538.24
Microsoft Offica Pro V4.3 WIN CD w/Bookshelf 538.24
Microsoft Office Pro V4.3 WIN licansa 458.68
Microsoft Oftice Pro V4.3 WIN upg 354.25
Microsoft Offica V4.2 WIN 449.03
Microsoft Oftice V4.2 WIN CD 449.03
Microsoft Office V4.2 WIN licansa 382.05
Microsoft Oftica V4.2 WIN upg 265.72
Microsoft PowarPoint V4.0 WIN 297.16
Microsoft PowerPoint V4.0 WIN upg 114.98
Microsoft Project V4.0 WIN 416.51
Microsoft Project V4.0 WIN vers upg 129.82
Microsoft Publisher V2.0 WIN 69.29
Microsoft Visual Basic Pro V4.0 WIN CD 443.49
MS Visual Basic Pro V4.0 WIN comp upg CD 219.18
MS Visuel Besic Pro V4.0 WIN vars upg CD 86.33
Microsoft Visuel Basic Std V4.0 CD 86.38
Microsoft Visual C++ V1.52 WIN 89.74

Adobe PageMaker V6.0

3.5" + CD **$545.78** CDW 57016
Upgrade, 3.5" + CD **$132.81** CDW 58930

Microsoft Visual FoxPro Pro V3.0 WIN CD 442.63
Microsoft Visual FoxPro Std V3.0 WIN upg CD 89.96
Microsoft Windows V3.11 ..... 92.06
Microsoft Windows V3.11 license 78.51
Microsoft Windows V3.11 upg 51.29
Microsoft Word V6.0 WIN 296.94
Microsoft Word V6.0 WIN upg 114.98
Microsoft Works V3.0 WIN 45.13
NetManage ECCO Pro V3.0 WIN 88.88
Norton Lambart Close-Up V6.0 ..... 115.87
Novell PerfectOftice Std V3.0 WIN CD 402.26
Novell Ouettro Pro V5.5 DOS 39.36
Novell Ouattro Pro V6.0 WIN + CD 236.58
Novell Ouaftro Pro V6.0 WIN upgrada 46.26
Novell WordPerfact V6.1 DOS 181.25
Novell WordPerfect V6.1 WIN 243.83
Novall WordParfect V6.1 WIN CD 241.67
Novell WordParfact V6.1 WIN comp upg 113.92
Novell WordPerfect V6.1 WIN vers upg CD 87.70
Peachtree Accounting V3.5 WIN CD + 3.5" 104.84
ProCD Select Phona 1996 WIN/MAC CD 84.28
ProCD Select Street Atles 1996 WIN CD 84.84
Ouark OuarkXPress V3.32 WIN 574.86
Ouertardeck DESOVIEW 386 V2.7 ..... 91.43
Ouertardack OEMM V8.0 WIN upg 38.09
Ouerterdack WabAuthor V2.0/MS Word WIN 43.10

Microsoft Project V4.1 for Windows 95 ** $70 rebate!*

Upgrade, 3.5" **$63.63*** CDW 55592
Upgrade, CD **$63.47*** CDW 64576
** After $70 manufacturer's rebate. Offer valid through 12/31/96 for Project V4.0 upgraders only.*

Softkay Celendar Creator Plus V2.0 WIN 37.10
Symantec WinFAX PRO V4.0 WIN 78.79
Symantac ACTI Mobila Link V2.0 ..... 236.73
Symantec ACT V2.0 WIN 171.24
Symantec Communications Suite V2.1 WIN 105.87
Symentec Disklock V3.5 WIN 79.82
Symentec Norton Anti Virus V3.0 DOS/WIN 49.20
Symentec Norton Utiilies V8.0 DOS/WIN 112.53
Symantec pcANYWHERE Host V2.0 WIN 61.78
Symantac pcANYWHERE Ramote V2.0 WIN 79.44
Symantec pcANYWHERE V2.0 WIN 119.21
Symantec pcANYWHERE V5.0 DOS 119.42
Symantac pcANYWHERE V5.0 DOS ramota 79.30
Ventana Netscapa Navigator V2.0 WIN 43.04
Walkar Reflections 1 V5.0 WIN 283.28

WINDOWS® 95 SOFTWARE

Borlend Paradox V7.0 WIN95 CD 268.84
Borlend Paradox V7.0 WIN95 upg 89.01
Borland Paradox V7.0 WIN95 upg CD 89.35
Ceere OmniForm V2.0 WIN95 ..... 172.24
Claris FileMaker Pro V3.0 WIN95 ..... 179.37
Coral Graphics Pack WIN95 CD 96.84
Coral Photopaint Plus V8.0 WIN95 CD 183.83
Corel Print Housa V1.0 WIN95 CD 25.70
Coral Print Housa V1.0 WIN95 CD 25.70
Coral WEB.DATA WIN95/WIN NT 94.97
CorelDRAW V3.0 or V4.0 to V6.0 upg WIN95 CD 358.02
CoralDRAW V5.0 to V6.0 WIN95 upg CD 224.18
CoralDRAW V8.0 WIN95 CD 438.37
CorelFLOW V3.0 WIN95 CD 125.90
Datastorm Procomm Plus V3.0 WIN95/WIN 122.77
Datastorm Procomm Plus V3.0 WIN95/WIN CD 122.77
Insat Sys HiJeak95 V1.0 WIN95 ..... 44.11
Lotus SmartSuita 98 WIN95 ..... 376.78
Lotus SmertSuite 96 WIN95 CD 374.84
Lotus SmartSuite 96 WIN95 upg 139.27
Lotus SmartSuita 96 WIN95 upg CD 138.72
Lotus Word Pro 95 WIN95 CD 93.15
Lotus Word Pro 96 WIN95 ..... 65.35
McAfee VirusScan V2.0 WIN95 ..... 44.23
Microcom Carbon Copy V3.0 WIN95 ..... 74.29
Microsoft 3D Movie Makar WIN95 ..... 37.50
Microsoft Access WIN95 ..... 296.94
Microsoft Access WIN95 upg 92.21
Microsoft Bookshalf WIN95 CD 44.94
Microsoft Cinamanie '96 WIN95 CD 29.60
Microsoft Encarta '96 World Atles WIN95 CD 44.94
Microsoft Excel WIN95 ..... 296.94
Microsoft Excel WIN95 upg 94.05
Microsoft Fury3 WIN95 CD 35.63
MS Homa Small Business Value Pack WIN95 CD 224.06
Microsoft Money for WIN95 ..... 29.20
Microsoft Monay WIN95 CD 29.20
Microsoft Offica Pro w/Access WIN95 upg 314.50
Microsoft Oftica Pro w/Bkshelf WIN95 CD 539.03
Microsoft Office Pro w/Bkshaft WIN95 upg CD 314.29
Microsoft Office Pro WIN95 ..... 539.03
Microsoft Office Std WIN95 ..... 449.14
Microsoft Office Std WIN95 CD 448.89

Microsoft Ottica Std WIN95 upg 223.97
Microsoft Office Std WIN95 upg CD 223.97
Microsoft Plusl WIN95 ..... 44.24
Microsoft Plusl WIN95 CD 45.13
Microsoft PowarPoint WIN95 ..... 296.94
Microsoft PowerPoint WIN95 upg 94.05
Microsoft Project WIN95 ..... 421.73
Microsoft Project WIN95 upg 133.63
Microsoft Publisher CD Deluxe WIN95 ..... 67.56
Microsoft Visual C++ Subscription WIN95 ..... 447.93
MS Visual C++ Subscription WIN95 upg CD 305.43
Microsoft Windows 95 ..... 183.47
Microsoft Windows 95 upg 94.77
Microsoft Windows 95 upg CD 94.77
Microsoft Word WIN95 ..... 296.94
Microaoft Word WIN95 ..... 296.94
Microsoft Word WIN95 upg 94.05
MS Word/Publisher Value Pack WIN95 CD 115.03
Microsoft Works w/Bookshalf WIN95 CD 68.16
Microsoft Works WIN95 ..... 45.13
NCD PC-Xwara for WIN95 upg 77.90
Outlook Schadule Itl WIN95/WIN 64.75
Ouarterdeck Cleen Sweap V2.0 WIN95 ..... 28.85
Ouarterdack OEMM V8.0 WIN95/WIN3.1 ..... 62.16
Arcada Backup for Windows 95 ..... 57.19
Stacker V4.1 WIN95 ..... 48.62
Sterfish Sidekick WIN95 ..... 45.13
Delrine WinFAX PRO V7.0 WIN95 ..... 77.35
Symantac Cafa WIN NT/WIN95 ..... 107.34
Symantec Communications Suite WIN95 CD 96.77
Symantac Norfon AntiVirus WIN95 ..... 72.14
Symantec Norton AntiVirus WIN95 upg 33.75
Symentac Norfon Navigator WIN95 ..... 91.77
Symantec Norton Navigator WIN95 trade-up 39.65
Symentec Norton Utilities WIN95 ..... 116.15
Symentec Norton Utilities WIN95 upg 57.24
Symantec pcANYWHERE32 WIN95/NT 131.80
Symantec pcANYWHERE32 WIN95/NT upg 62.70
Symantec WinFAX PRO V7.0 WIN95 CD 78.62
Visio Technical V4.0 WIN95 ..... 256.11
Visio V4.0 WIN95 CD 132.88
Visio V4.0 WIN95 upg CD 73.21

COMPAQ LTE 5300

new!

The ultimate in notebook power and performance

◆ 133MHz Intel Pentium® processor ◆ 16MB RAM standard, expandable to 72MB ◆ 1.35GB hard drive ◆ 12.1" active-matrix color display ◆ Lithium Ion battery ◆ 7.4 lbs.

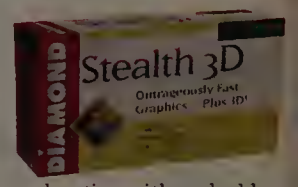
$5761.87 CDW 68334

DIAMOND MULTIMEDIA

new!

Stealth 3D 2000 Multimedia Accelerator

Outrageously fast graphics and high-performance 3D animation



◆ S3 ViRGE integrated graphics controller ◆ 2MB EDO DRAM, PCI-bus architecture ◆ 64-bit graphics acceleration with scaleable digital video playback ◆ True color at 800 x 600, supports resolutions up to 1600 x 1200 ◆ Upgradeable to hardware MPEG and TV ◆ Games included: Descent II™ and Destruction Derby™ ◆ 5-year warranty

$178.23 CDW 69274

Adobe Photoshop V3.0.5 for Windows 95

Think of it as a camera for your mind

Adobe® Photoshop® is the world's leading photo design and production tool. V3.0.5 adds even stronger creative control, with support for multiple layers and lighting effects. New color correction tools and an enhanced interface make editing and production easier than ever.

◆ CMYK preview ◆ New creative filters ◆ New palette design ◆ Selective color correction ◆ Drag-and-drop support on Windows® 95 and Windows NT™ ◆ Includes a Deluxe CD-ROM with tutorials, stock photography and more

3.5" + CD ..... **$545.78** CDW 63943
Upgrade ..... **$159.55** CDW 63944

CDW. WINNER OF SEVEN COMPUTER SHOPPER BEST BUY AWARDS

Visit our newly redesigned web site!

www.cdw.com

SOLUTIONS NEED AT CDW®

CDW CIRCLE OF SERVICE®

COMPUTER DISCOUNT WAREHOUSE™

IBM® ThinkPad® 760EL and 760ELD

IBM Business Partner

◆ 100MHz, 120MHz or 133MHz Intel Pentium® processor ◆ 8MB or 16MB RAM std., 72MB or 80MB max. respectively ◆ 810MB or 1.08GB hard drive ◆ 12.1" TFT active-matrix SVGA color display ◆ 16-bit audio with Sound Blaster® support ◆ Built-in microphone and speakers ◆ Preinstalled Microsoft® Windows® 95 ◆ 3-year limited warranty

760ELD 100MHz, 8MB, 810MB, 4X CD-ROM **$4499.00** CDW 67909
760EL 120MHz, 8MB, 1.08GB **$4799.00** CDW 67908
760EL 133MHz, 16MB, 1.08GB **$5499.00** CDW 67906

intel inside pentium PROCESSOR

FREE Lotus SmartSuite with these IBM models

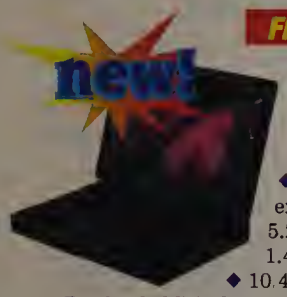
NEC Versa V Series

CDW's Best Notebook Value

Superior NEC performance and value

◆ SL-enhanced IntelDX2™ 50MHz or IntelDX4™ 75MHz CPU ◆ 4MB RAM, expandable to 20MB (V/50C) or 32MB (V/75C) ◆ 340MB or 540MB removable hard drive ◆ 9.5" or 10.1" TFT active-matrix color display ◆ PCMCIA slot: two Type II or one Type III

V/50C 50MHz, 340MB hard drive, 9.5" display **$1269.00** CDW 44301
V/75C 75MHz, 540MB hard drive, 10.1" display **$1499.00** CDW 53855



IBM® ThinkPad® 365E and 365ED

◆ Cyrix 5x86C 100MHz CPU ◆ 8MB RAM standard, expandable to 24MB ◆ 540MB hard drive ◆ Integrated 5.25" CD-ROM drive (365ED) ◆ External 3.5", 1.44MB floppy disk drive (365ED) ◆ 10.4" dual-scan color display ◆ Pre-loaded Windows® 95 ◆ 1-year limited warranty

ThinkPad 365E **$1999.00** CDW 68163
ThinkPad 365ED **$2499.00** CDW 68164

CALL for the NEW 365X & 365XD Series

TOSHIBA Portege 610CT

Ultra-portable 90MHz Pentium® processor performance!

intel inside pentium PROCESSOR

◆ 90MHz Intel Pentium® processor, 8MB EDO RAM ◆ 720MB hard drive ◆ 9.5" active-matrix color display ◆ Weighs less than 5 lbs.

$3149.00 *$700 PRICE DROP!* CDW 61156

Texas Instruments Extensa 570 Series

Extraordinary value and performance

◆ 100MHz Intel Pentium® processor ◆ 8MB RAM standard, expandable to 40MB ◆ 810MB or 1.2GB removable hard disk drive ◆ Removable 4X or 6X CD-ROM and floppy disk drive ◆ 11.3" DSTN dual-scan (570CD) or 10.4" TFT active-matrix (570CDT) SVGA color display ◆ 6.4 lbs.

CALL for the NEW Extensa 510s

570CD 810MB, 6X CD-ROM **$2894.07** CDW 67239
570CDT 1.2GB, 4X CD-ROM **$3849.69** CDW 67240

intel inside pentium PROCESSOR

HEWLETT® PACKARD HP OmniBook 5500 Notebook PC

The ultimate in power and flexibility

◆ 133MHz Intel Pentium® processor ◆ 16MB RAM standard, expandable to 64MB ◆ 1.35GB hard drive ◆ 12.1" TFT active-matrix color display with 800 x 600 SVGA resolution ◆ Plug and Play compatible ◆ 3-year limited warranty

intel inside pentium PROCESSOR

$5893.24 CDW 68762

COMPAQ LTE 5200 Series

new! at CDW®!

The ultimate in power and flexibility

◆ 120MHz Pentium® processor ◆ 8MB or 16MB RAM standard, expandable to 72MB ◆ 1.35GB hard drive ◆ 10.4" or 11.3" active-matrix color display ◆ Optional 4X CD-ROM drive available

See the Compaq LTE 5300 on the facing page!

LTE 5200 120MHz, 8MB RAM, 1.35GB hard drive, 10.4" display
$4801.37 CDW 60600
LTE 5280 120MHz, 16MB RAM, 1.35GB hard drive, 11.3" display
$5185.57 CDW 68333

intel inside pentium PROCESSOR

AST. Ascentia J30

Progressive features and advanced ergonomics

◆ 100MHz Intel Pentium® processor ◆ 8MB RAM std., 40MB max. ◆ 800MB removable hard drive ◆ 10.4" color display ◆ Integrated 14.4K bps data and fax modem ◆ Integrated ESS 16-bit Sound Blaster® compatible audio and built-in speakers ◆ 5.8 lbs. ◆ 3-year limited warranty

Ascentia J30 CSS10 dual-scan display
$2629.22 CDW 64482
Ascentia J30 CTS10 active-matrix display
$2808.50 CDW 64483

intel inside pentium PROCESSOR

Looking for the Ascentia P50? Turn the page!

CDW® sells for less and services you better!™

800-865-4CDW (4239)

FREE configuration of your new notebook purchase from CDW®!

©1995 CDW Computer Centers, Inc.

Circle 68 on reader service card

PCW1703 PC World 7/96

COMPUTER DISCOUNT WAREHOUSE™

Microsoft Office for Windows 95

$40 Rebate*

Frees you to focus on your job, not your software

Office Standard: Includes four full-featured programs: Word, Excel, PowerPoint and Schedule+

Upgrade, 3.5"	$183.97*	CDW 55616
Upgrade, CD	$183.97*	CDW 55564
3.5"	$449.14	CDW 55563
CD	$448.89	CDW 55565

Office Professional: Includes the programs above plus Access and Bookshelf '95 (CD-ROM version only)

Upgrade, 3.5"	$274.50*	CDW 63039
Upgrade, CD w/Bookshelf '95	$274.29*	CDW 62863
3.5"	$539.03	CDW 63040
CD w/Bookshelf '95	$539.03	CDW 62766

**After $40 mail-in rebate for upgrades from a previous version of Microsoft Office, Office Professional, Word, Excel, PowerPoint or Access. Competitive upgrades do not qualify for this offer. Offer valid through 12/31/96.*

WHY PAY RETAIL?

CDW Sells For Less!™

Snappy Video Snapshot

The easiest way to bring pictures into your PC

Grab 24-bit color PC stills from any video source and create incredible business reports, newsletters, brochures, catalogs, bulletins and much more! Supports BMP, PCX, TIFF, TGA and JPEG file formats for thousands of Snappy uses.

◆ Resolution up to 1500 x 1125 ◆ Snappy image capture, processing and enhancement software ◆ Fauve Matisse Snappy Edition—painting, retouching and tilting software ◆ Gryphon Morph V2.5—morphing, warping and special effects software ◆ Preinstalled 9-volt battery ◆ High-grade video cable

$195.98 CDW 58450

Manufactured by Play Incorporated; Distributed by Minolta Corporation

HARDWARE, SOFTWARE & PERIPHERALS AT DISCOUNT PRICES

NETWORKING PRODUCTS

NOVELL

NetWare V4.1

5 User CD	568.22
10 User CD	1293.52
25 User CD	1885.46
100 User CD	3826.20

NetWare V4.1 upgrade

5 User to 5 User CD	262.72
5 User to 10 User CD	1004.55
5 User to 25 User CD	1634.00
10 User to 10 User CD	661.26
10 User to 25 User CD	1449.18
10 User to 50 User CD	1844.47
20 or 25 User to 25 User CD	989.64
25 User to 50 User CD	1476.14
25 User to 100 User CD	2524.76
50 User to 50 User CD	1317.63
50 User to 100 User CD	2107.56
100 User to 100 User CD	1843.81

NetWare V3.12

5 User 3.5"	589.59
10 User 3.5"	1334.85
25 User 3.5"	2167.99
50 User 3.5"	2739.18
100 User 3.5"	3826.20

Microsoft BackOffice

Microsoft Windows NT

Windows NT Network Value Pack	894.56
Windows NT Server CD	628.03
Single client license	38.26
20 client license pack	503.27

Microsoft SQL Server

SQL Server CD	887.93
SQL Server upgrade CD	445.72
Single client license	133.52
20 client license pack	2118.96

Microsoft Systems Mgmt Server

SMS Server CD	583.18
SMS Server upgrade CD	569.88
Single client license	48.14

Microsoft SNA Server

SNA Server CD	359.59
Single client license	56.73
20 client license pack	865.85

Microsoft Mail Server

Mail Server upgrade CD	296.94
5 client license pack	239.45

3Com

3C509B Etherlink III 10BT 5 pack	416.70
3C509B Etherlink III 10BT + AUI	107.98
3C509B Etherlink III 10BT + AUI 5 pack	441.95
3C509B Etherlink III coax	109.75
3C509B Etherlink III coax 10BT	103.89
3C509B Etherlink III combo	122.07
3C509B Etherlink III combo 5 pack	513.67
3C509B Etherlink III PCI 10BT	123.71
3C509B Etherlink III PCI combo	164.85
3C595 Fast Etherlink PCI 10/100BT	161.91
3C16170 Linkbuilder TP/12 port	319.36
3C16670 Linkbuilder FMSII 12 port	511.66

Artisoft

NodeRunner/SI 2000T	71.80
NodeRunner Pro combo	78.33
NodeRunner/SI 2000A	84.98
T-Runner II 8-port 10BT	164.43
T-Runner II 16-port 10BT	322.93
Simply LANtastic starter kit	167.05
LANtastic V6.0	74.34
LANtastic V6.0 5 user	304.88
LANtastic V6.0 starter kit coax	225.30
LANtastic V6.0 add-on kit 10BT	117.93
LANtastic V6.0 add-on kit coax	117.93

LANtastic for Windows® 95 also available, call CDW today for details.

ASP

Intelligent AutoSwitch 2 computers to 1 printer	24.43
Intelligent AutoSwitch 4 computers to 1 printer	35.94
JetLAN/P Plus pocket server	272.28
SNAP starter kit 2 computers to 1 printer	109.80
SNAP add-on transmitter	41.92

Bay Networks

SynOptics System 800 10BT 8-port hub	204.00
SynOptics System 800M 10BT 8-port hub	536.60

IBM

Token Ring auto adapter 16/4 ISA	199.55
Token Ring MAU multiport	385.99

NETWORKING PRODUCTS

intel

EtherExpress 16 10BT	99.40
EtherExpress 16 10BT 5 pack	458.76
EtherExpress 16 combo	119.20
EtherExpress 16 combo 5 pack	542.71
EtherExpress EISA coax	402.82
EtherExpress MCA 10BT	166.94
EtherExpress PRO/10+Mbps ISA	98.23
EtherExpress PRO/100Mbps EISA	252.17
EtherExpress PRO/100Mbps PCI	139.01
EtherExpress PRO/100Mbps PCI 5 pack	638.54
NetportExpress EL Ethernet	373.30
TokenExpress PRO ISA LAN adapter	242.73

LINKSYS

5-port Workgroup Hub	76.78
8-port Workgroup Hub	109.86
Combo Ether16 LAN card	39.73
Combo EtherPCI LAN card	117.26

SMC

EtherEZ 10BT	92.03
EtherEZ coax	91.63
EtherEZ combo	104.81
EtherPower 10/100BT PCI	146.65
EtherPower 10/100BT PCI 5 pack	694.95
EtherPower 10BT PCI	122.66
EtherPower 10BT 5 pack	506.62
EtherPower coax PCI	148.63
EtherPower coax PCI 5 pack	665.62
TigerHub TP6 6 10BT ports + AUI	165.15
TigerHub TP6B 6 10BT ports + BNC	181.41
TigerHub TP12 12 10BT ports + AUI	355.06
ARCNET 8-port active hub coax	223.86
ARCNET PC600WS coax	123.61
Ethernet 8-port 10BT hub	288.21
TokenCard Elite 16/4	211.74

WYSE

Link MC5 amber/green/white	269.97
Wyse 55 amber/green/white	247.12
Wyse 60 amber/green/white	316.80
Wyse 160 amber/green/white	377.54

Xircom

PE310B2 pocket Ethernet coax	266.01
PE310BC pocket Ethernet coax	304.12
PE310BT pocket Ethernet 10BT	266.01
PT316CTP pocket Token Ring III	448.10
PPX03 Parallel port multiplexor	76.66

TAPE & REMOVABLE MEDIA DRIVES

COLORADO MEMORY SYSTEMS INC.

Jumbo 350 internal	103.71
Jumbo 1400 internal	226.67
Trakker 350MB parallel port w/tape	164.65
T1000 800MB Travan w/tape	161.24
T1000E 800MB parallel port	189.68
PowerTape 2GB external w/tape	1089.98

CONNER

Tape*Stor 800MB Travan internal	149.35
Tape*Stor 800MB Travan parallel	246.53
Tape*Stor 850MB parallel	316.80
Tape*Stor 3200MB internal	253.46
Tape*Stor 4GB internal EIDE	351.03

iomega

Zip drive 100MB parallel	199.00
Zip drive 100MB SCSI	199.00
Ditto Easy 800MB Travan tape drive internal	119.95
Ditto Easy 800MB Travan tape drive external	149.00
Jaz drive 1GB internal SCSI-II	499.00
Jaz drive 1GB external SCSI-II	599.00
Jaz drive 1GB cartridge	124.00

MICROSOLUTIONS

Backpack 3.5" 1.44MB floppy parallel	151.71
Backpack 800TD 800MB Travan parallel	159.25

TAPE & REMOVABLE MEDIA DRIVES

EXABYTE

EXB-8700 8MM	1669.52
EXB-8505XL 7GB tape backup internal	1878.78

SyQuest

EZ135 135MB IDE internal	194.85
EZ135 135MB SCSI external	199.99
EZ135 135MB external	245.32
EZ135 135MB cartridge	23.11

MULTIMEDIA AND CD

Creative Labs

Blaster 4x CD kit	125.69
Discovery 4x CD PnP multimedia kit	274.48
Sound Blaster 16/3D value edition IDE	94.63
Sound Blaster AWE32 PnP	222.43
Sound Blaster Value 4X CD kit	233.69

ADS VGA to TV Elite internal	129.99
ADS VGA to TV Elite external	195.05
ALPS 4X CD 4-disc changer internal	307.01
Advent PP170 speakers 5W	64.56
Advent PP270 speakers 25W	112.52
Advent PP570 speakers 35W	245.18
Advent PP622 speakers/subwoofer	173.32
Altec Lansing ACS500 surround system	294.18
Connectix QuickCam for Windows	98.05
Diamond Multimedia Kit 4400 4X CD internal	209.88
Diamond Multimedia Kit ULTRA 8X CD	328.13
Jensen JPS35 speakers 5W	57.26
Jensen JPS45 speakers 10W	84.76
Microsolutions 4X CD parallel	246.53
Minolta Snappy video still capture	195.98
NEC 6Xi 6X CD internal	243.82
NEC 6Xe 6X CD external	335.65
NEC 4x4 4X CD 4-disc changer external	273.20
NEC 4Xc 4X CD 7-disc changer external	342.15
Pioneer DRM624X 4X CD 6-disc changer external	294.93
Plextor 6X CD internal	306.44
Sony PRD-150 portable Discman® PCMCIA Type II	342.66
Sony 4X CD IDE internal	106.89
Sony 4X CD SCSI-2 internal	158.00
SunMoonStar 6X CD internal	178.41
SunMoonStar 6X CD portable	259.37
Toshiba 3701B 6.7X CD SCSI internal	251.15
Turtle Beach TBS-3001 4X CD 3-disc changer	187.80
Turtle Beach Tropez Plus 32	219.11
Yamaha YST M-15 speakers	69.63
Yamaha YST M-15 speakers & subwoofer	169.86

INPUT DEVICES

ALPS

Desktop GlidePoint	65.87
GlidePoint Windows 95 keyboard	94.11

CALCOMP

Drawing Slate II 4x5 w/pressure pen	128.25
Drawing Slate II 6x9 w/pressure pen	196.96
Drawing Slate II 12X12 4 button cordless	219.39

EPSON

PhotoPC digital camera	499.00
ActionScanning System II	429.67
ES1000C color scanner	727.67
ES1200C Pro color scanner	1125.16

HEWLETT PACKARD

HP ScanJet 4S	301.35
HP ScanJet 4C	946.17
HP ScanJet 4C document feeder	453.97

LOGITECH

MouseMan 96	53.89
PageScan color scanner	361.85
TrackMan Live! cordless pointer	118.35
TrackMan Marble	85.11

KODAK

DC40 Digital Science Camera	699.00
DC50 Digital Science Camera	999.00

MICROTEK

ScanMaker E3 color flatbed	375.29
ScanMaker E6 color flatbed	556.49
ScanMaker III color flatbed	1975.39
ScanMaker 35T slide scanner	684.66

INPUT DEVICES

UMAX

Vista-S6 PCLE2	472.59
Vista-S12 PCPro2	841.13
Powerlook II PCPro2	2706.78

VISIONEER

PaperPort VX	274.94

MONITORS

Mag Innovision DX1495 PnP 14" .28mm	282.13
Mag Innovision DX1595 PnP 15" .28mm	374.14
Mag Innovision DX1795 PnP 17" .26mm	658.44
Mag Innovision DX17T 17" .26mm	748.99
Mag Innovision MXP17F 17" .26mm	829.49
Mag Innovision MX21F 21" .28mm	1484.25
Magnavox CM2089 14" .28mm	246.53
Magnavox CM2099 14" .28mm	252.29
Magnavox CM2015 15" .28mm	337.18
Magnavox CM1215 15" .28mm	369.77
Magnavox CM4018 17" .28mm	598.07
Magnavox CM5600 20" .27mm	1278.17
Magnavox 20CM64 20" .31mm	1013.19
NEC XV15+ 15" .28mm	473.13
NEC XV17+ 17" .28mm	799.84
NEC XP17 17" .28mm	1058.89
NEC XP21 21" .28mm	1919.54
NEC XE21 21" .28mm	1659.65
Samsung 15GLi 15" .28mm	423.09
Samsung 17GLi 17" .28mm	749.00
Samsung 17GLsi 17" .26mm	919.00
Sony Multiscan 15SX 15" 12x10 PnP .25mm	428.41
Sony Multiscan 15sfII 15" PnP .25mm	484.45
Sony Multiscan 17sfII 17" PnP .25mm	811.60
Sony Multiscan 17sfII 17" 16x12 PnP .25mm	1075.61
Sony Multiscan 20sfII 20" PnP .30mm	1666.22
ViewSonic 15GS 15" .27mm	405.80
ViewSonic 17GS 17" .27mm	651.18
ViewSonic Optiquest V775 17" .26mm	663.15
ViewSonic 21PS 21" .25mm	1579.72

VIDEO CARDS

ATI Graphics Xpression ISA 1MB	106.75
ATI Graphics Xpression ISA 2MB	132.18
ATI Graphics Xpression PCI 2MB	132.18
ATI Grephics Xpression VLB 2MB	157.14
ATI Graphics Pro Turbo ISA 2MB	262.02
ATI Graphics Pro Turbo PCI 2MB	262.02
ATI Graphics Pro Turbo VLB 2MB	219.25
ATI Graphics Pro Turbo PCI 4MB	399.37
Diamond SpeedStar Pro ISA 1MB	93.68
Diamond Edge 2120XL 1MB DRAM	213.34
Diamond Edge 2200XL 2MB DRAM	275.33
Diamond Edge 3240XL 2MB VRAM	374.37
Diamond Edge 3400XL 4MB VRAM	522.01
Intel Smart Video Recorder Pro	402.82
Matrox Millennium PCI 2MB WRAM	314.51
Matrox Millennium PCI 4MB WRAM	456.92

OVERDRIVE PROCESSORS

intel

Intel OverDrive DX2/50	115.54
Intel OverDrive DX2/66	129.40
Intel OverDrive DX4/75	138.66
Intel OverDrive DX4/100	178.74
Intel OverDrive Pentium 63MHz	138.66
Intel OverDrive Pentium 83MHz	189.27
OverDrive Pentium 120/133MHz upg for 5/60, 5/66	339.11
OverDrive Pentium 120/133MHz upg for 5/75	339.11
OverDrive Pentium 150MHz upg for 5/90	414.85
OverDrive Pentium 166MHz upg for 5/100	556.72

MEMORY UPGRADES

simple TECHNOLOGY

Lifetime Warranty!

Compaq Prolinea 4MB	121.25
Compaq Prolinea 8MB	233.82
Compaq Prolinea 16MB	389.88
HP LeserJet 4P 4MB	102.48
HP LaserJet 4P 8MB	201.23
HP LeserJet 4 4MB	121.25
HP LaserJet 4 8MB	233.82
IBM ThinkPad 755 8MB	257.15
IBM ThinkPad 755 16MB	465.46
NEC Versa V 4MB	136.31
NEC Versa V 8MB	253.66
NEC Versa V 16MB	519.20
Toshiba 1900-4600 4MB	146.24
Toshiba 1900-4600 8MB	257.15
Toshiba 1900-4600 16MB	494.46
Toshiba T2100, T2500 4MB	191.46
Toshibe T2100, T2500 8MB	257.15
Toshiba T2100, T2500 16MB	459.94

If you don't see it, CALL. CDW carries a complete line up of Simple Tech memory products

Most orders ship the same day

NASDAQ

BUY WITH CONFIDENCE
CDW® IS A NASDAQ TRADED COMPANY
TICKER SYMBOL CDWC
D & B rated 5A1
Duns 10-762-7952

DISCOVER NOVUS · VISA · MasterCard · American Express Card

Credit card charges are not submitted until time of shipment. For your protection, we ship only to your credit card's verified billing address. Freight is calculated as the carrier's actual freight charge plus insurance and packaging material. The cost of insurance is 0.35% (0.0035) of the order total. Packaging materials will not exceed $4.00 for single package shipments or $6.00 for multi-package shipments. Before returning any product, you must obtain an RMA number. Non-defective returns are subject to a restocking fee. Software, chips and other electronic components are not returnable. Allow 10 business days for shipping when paying by personal check. All pricing subject to change. For all prices and products, CDW reserves the right to make adjustments due to changing market conditions, product discontinuation, manufacturer price changes or typographical errors in advertisements. All trademarks and registered trademarks are the sole property of their respective owners.

CDW® TELEPHONE HOURS
Sales
Monday-Friday 7am-9pm CDT
Saturday 9am-5pm CDT
Tech Support for Customers
Monday-Friday 8am-9pm CDT
Saturday 9am-5pm CDT

If you find a better price, call CDW® before you buy
Fax: 847-465-6800
Sales: 800-865-4CDW (4239)

CDW Computer Centers, Inc. • 1020 E. Lake Cook Road • Buffalo Grove, IL 60089

PCW1703
PC World 7/96

AST. NEW!

Ascentia P50

◆ 133MHz Intel Pentium® processor ◆ 8MB RAM std., expandable to 40MB ◆ 800MB or 1.2GB removable hard drive ◆ 11.3" TFT active-matrix SVGA color display ◆ Interchangeable 4X CD-ROM ◆ 3-year limited warranty w/48-Hour Rapid Repair for 1st year

P50 CTS11 800MB hard drive
$4221.60 CDW 65840

P50 CTS11 1.2GB hard drive
$4685.55 CDW 65841

intel inside pentium PROCESSOR

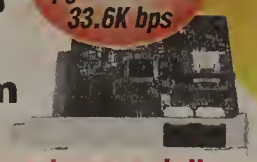
The Intel Inside® Logo and Pentium® are Registered Trademarks of Intel Corporation

WHY SETTLE FOR LESS?

CDW® SERVICES YOU BETTER!™

U.S. Robotics Sportster Winmodem 28.8

Software-upgradeable to 33.6K bps



The faxmodem made especially for Windows-based computers

NEW!

◆ Data: 28.8K bps ◆ Fax: V.17 Group III 14.4K and 9.6K bps Class 1 and Class 2.0 send/receive ◆ Maximum throughput: 115.2K bps ◆ True ITU-T V.34 at 28.8K bps ◆ V.32 *bis* at 14.4K bps ◆ V.42/MNP 2-4 error control ◆ V.42 *bis*/MNP 5 data compression ◆ 5-year warranty on parts and labor

Sportster Winmodem 28.8	**$142.75**	CDW 65767
Sportster Voice 28.8 internal	**$188.19**	CDW 65766
Sportster Voice 28.8 external	**$216.42**	CDW 67990

CDW®

CDW® CARRIES OVER 20,000 PRODUCTS. IF YOU DON'T SEE IT, CALL!

COMPUTER DISCOUNT WAREHOUSE™

COMPUTERS

TOSHIBA

100CS 5/75 8MB 500MB 10.4" dual-scan	1939.65
T2130CS DX4/75 500MB 10.4" dual-scan	1578.53
410CS 5/90 8MB 772MB 11.3" dual-scan	3183.04
410CDT 5/90 8MB 772MB 11.3" active 4X CD	4319.52
Portege 610CT 5/90 720MB 9.5" active	3149.00
Tecra 700CS 5/120 8MB 1.2GB 11.3" dual-scan	3934.53
Tecra 700CT 5/120 16MB 1.2GB 11.3" active	4957.28
Tecra 720CDT 5/133 16MB 1.2GB 12.1" active 6X CD	6198.89

AST.

Ascentia J10 5/75 8MB 800MB 10.4" dual-scan	2126.63
Ascentia J30 5/100 8MB 800MB 10.4" dual-scan	2629.22
Ascentia J30 5/100 8MB 800MB 10.4" active	2808.50
Ascentia P30 5/100 8MB 800MB 11.3" dual-scan 4X CD	3289.95
Ascentia P30 5/100 8MB 1.2GB 11.3" dual-scan 4X CD	3754.13
Ascentia P50 5/133 8MB 800MB 11.3" active 4X CD	4221.60
Ascentia P50 5/133 8MB 1.2GB 11.3" active 4X CD	4685.55
Advantage! desktops	
624-5/100 16MB 1.2GB 14.4K bps 6X CD	1562.17
626-5/133 16MB 1.2GB 14.4K bps 6X CD	2095.43
628-5/150 16MB 1.6GB 14.4K bps 6X CD	2284.55
822-5/100 16MB 1.2GB 28.8K bps 6X CD	1659.53
824-5/133 16MB 1.6GB 28.8K bps 6X CD	2239.36
826-5/150 16MB 2.1GB 28.8K bps 3 disc 6X CD	2569.57
828-5/166 16MB 2.1GB 28.8K bps 3 disc 6X CD	2759.57

COMPAQ

LTE 5000 5/75 8MB 510MB 10.4" dual-scan	2879.37
LTE 5000 5/75 8MB 810MB 11.3" dual-scan	3275.87
LTE 5000 5/75 8MB 810MB 10.4" active	3648.77
LTE 5100 5/90 8MB 810MB 10.4" active	4032.97
LTE 5100 5/90 8MB 810MB 10.4" active 2X CD	4417.17
LTE 5200 5/120 8MB 1.35GB 10.4" active	4801.37
ProLinea Series Desktops	
ProLinea 575e 5/75 8MB 630MB	1344.70
ProLinea 575e 5/75 8MB 1.06GB	1457.70
ProLinea 5100e 5/100 8MB 630MB	1457.70
ProLinea 5100e 5/100 8MB 1.06GB	1582.00
ProLinea 5120e 5/120 8MB 630MB	1582.00
ProLinea 5100 5/100 8MB 630MB	1593.30
ProLinea Series Mini-Towers	
ProLinea 5133 MT 5/133 16MB 2GB	3186.60
ProLinea 5150 MT 5/150 16MB 2GB	3282.65
ProLinea 5166 MT 5/166 16MB 2GB	3508.65
Deskpro Series Desktops	
Deskpro 575 5/75 8MB 840MB	1666.75
Deskpro 5100 5/100 8MB 840MB	1802.35
Deskpro 5100 5/100 16MB 1.2GB	2237.40
Deskpro 5120 5/120 16MB 1.2GB	2361.70
Deskpro 5133 5/133 16MB 1.2GB	2712.00
Deskpro 5133 5/133 16MB 2GB	2689.40
Deskpro 5133 5/133 16MB 2GB 4X CD	3299.60
Deskpro 5150 5/150 16MB 1.2GB	2869.20
Deskpro 5150 5/150 16MB 2GB	3028.40
Deskpro 5166 5/166 16MB 1.2GB	3096.20
Deskpro 5166 5/166 16MB 2GB	3621.65

LOOKING FOR THE LATEST COMPAQ NOTEBOOKS? CALL CDW® FOR A COMPLETE LINE UP!

IBM

ThinkPad portables	
365E 5/100 8MB 540MB 10.4" dual-scan	1999.00
365ED 5/100 8MB 540MB 10.4" dual-scan 4X CD	2499.00
760E 5/120 8MB 810MB 12.1" active	4999.00
760E 5/120 8MB 1.2MB 12.1" active	5199.00
760E 5/133 16MB 1.08MB 12.1" active	5999.00
760ED 5/133 16MB 1.2GB 12.1" active 4X CD	6999.00
760EL 5/100 8MB 810MB 11.3" dual-scan	3399.00
760EL 5/120 8MB 810MB 11.3" dual-scan	3599.00
760EL 5/120 8MB 1.08GB 12.1" active	4799.00
760EL 5/133 16MB 1.08GB 12.1" active	5499.00
760ELD 5/100 8MB 810MB 12.1" active 4X CD	4499.00

FREE Lotus SmartSuite included with these IBM ThinkPad models!

PC300 Series desktops	
PC300 5/75 16MB 850MB 5 bays	1909.00
PC300 5/90 16MB 850MB 3 bays	1898.00
PC300 5/100 16MB 850MB 3 bays	1955.00
PC300 5/100 16MB 850MB 5 bays	2013.00
PC300 5/133 16MB 635MB 3 bays	2069.00
PC300 5/133 16MB 635MB 5 bays	2128.00
PC300 5/133 16MB 1.2GB 5 bays	2243.00
PC300 5/166 16MB 1.2GB 3 bays	2959.00
PC300 5/166 16MB 1.2GB 5 bays	3019.00
PC700 Series desktops	
PC700 5/100 16MB 1GB 5 bays Selecta	2829.00
PC700 5/133 16MB 1GB 5 bays Selecta	3347.00

COMPUTERS

HEWLETT PACKARD

OmniBook Portables	
HP OmniBook 5000CTS 5/90 16MB 1.2GB 10.4" active	4631.64
HP OmniBook 5000CTS 5/120 16MB 1.2GB 10.4" active	4855.37
HP OmniBook 5500 5/133 16MB 1.3GB 12.1" active	5893.24

NEC

Versa V 4/50 4MB 340MB 9.5" active	1269.00
Versa V 4/75 4MB 540MB 10.1" active	1499.00
Versa 550D 5/100 8MB 540MB 10.4" dual-scan	1699.00
Versa 2200C 5/75 8MB 810MB 9.5" active	2449.00
Versa 2205C 5/75 8MB 810MB 9.5" active 14.4K bps	2499.00
Versa 4000 5/75 8MB 810MB 10.1" active 4X CD	3799.00
Versa 4050H 5/90 8MB 810MB 10.4" active	4099.00
Versa 4080H 5/120 8MB 1GB 10.4" active	4399.00

SAMSUNG ELECTRONICS

SENS 810 5/100 8MB 1.3GB 12.1" active 6X CD	3799.00
SENS 810 5/120 16MB 1.3GB 12.1" active 6X CD	4299.00
SENS 810 5/133 16MB 2.1GB 12.1" active 6X CD	4999.00

TEXAS INSTRUMENTS

Extensa 560CD 5/75 8MB 810MB 10.4" dual-scan 4X CD	2701.43
Extensa 560CDT 5/75 8MB 1.2GB 10.4" active 4X CD	3657.42
TM5100 5/90 8MB 1.2GB 10.4" active	3369.03
TM5200 5/120 8MB 1.2GB 11.3" active	4614.18
TM5300 5/133 8MB 1.2GB 11.3" active	5286.45

PRINTERS

OKIDATA

184 Turbo	228.28	ML591	603.67
ML320	315.50	Pacemark 3410	1254.16
ML321	445.15	OL600e	399.00
ML380	222.74	OL610e/PS	696.71
ML395	1005.83	OL810E	755.42
ML520	379.78	OL1200	1096.11
ML521	509.07	OKIJET 2010	326.48
ML590	445.72		

Canon

BJ30 mono	265.50	BJC610	429.00
BJC70 color	359.79	BJC4100	299.00
BJC210	199.00		

EPSON

DFX5000 Plus	1385.48	LQ1170	689.85
DFX8000	2333.18	LQ2170	599.00
FX870	289.45	LX300	165.41
FX1170	376.56	Stylus 1500	995.00
FX2170	499.00	Stylus Color II	299.00
LQ570+	246.25	Stylus Color IIs	208.65
LQ870	443.03	Stylus Color Pro	499.00
LQ1070+	383.04	Stylus Pro XL	1799.00

LEXMARK

4039 10 Plus 10ppm	1079.20
Color JetPrinter 1020	173.93
Color JetPrinter 2070	396.66
Optra C color laser	5913.75
Optra E 6ppm	542.17
Optra LX+ 16ppm	1922.73
Optra LXi+ 16ppm	2594.95
Optra R+ 16ppm	1385.60
Optra R+ 16ppm 2 paper trays	1587.62
WinWriter 150c thermal inkjet	274.95

Panasonic

1150	133.81	3123	256.81
2023	182.70	KX-P6100 Laser	398.42
2130	204.29	KX-P6500 Laser	446.69
2135 color	247.53		

HEWLETT PACKARD

HP DeskJet 340 portable	296.69
HP DeskJet 600	179.49
HP DeskJet 600C	246.00
HP LaserJet 5L	479.00
HP LaserJet 5P	897.87
HP OfficeJet inkjet fax/copier/printer	489.80
HP OfficeJet LX inkjet fax/copier/printer	585.84

PRINTERS

TEXAS INSTRUMENTS

microLaser 600	695.69
microLaser Pro/8	1108.37
microLaser Pro E	1207.77
microLaser PowerPro/12	1362.91

COSTAR

LabelWriter XL WIN	142.12
LabelWriter XL Plus WIN	218.81

HARD DRIVES & CONTROLLERS

Maxtor

540MB EIDE	176.06
1.26GB IDE	239.78
1.6GB Fast-ATA	275.33

CONNER

540MB EIDE	175.23	1.08 Fast SCSI-2	289.66
850MB Fast-ATA	199.71	2.14GB Fast SCSI-2	619.49
1.08MB IDE	225.37	4.29GB Fast SCSI-2	961.74

Seagate

545MB Fast-ATA	181.93
631MB Fast-ATA	184.57
1.08GB Fast-ATA2	228.33
1.08GB Fast SCSI-2	256.32
1.6GB Fast-ATA2	305.29
2.0GB Fast SCSI-3	664.48
2.1GB Fast ATA-2	353.33
2.14GB Fast SCSI-2	713.00
2.14GB F/W SCSI-2	817.92
4.29GB Fast SCSI-2	956.12
9GB Fast SCSI-2	2044.42

WESTERN DIGITAL

Caviar 635MB IDE	191.31
Caviar 853MB EIDE	201.29
Caviar 1GB EIDE	217.15
Caviar 1.2GB EIDE	229.48
Caviar 1.62GB EIDE	292.62

CONTROLLERS

Acculogic SIDE-3+ w/on-board BIOS	38.53
Acculogic SIDE-4+ w/par 2 serial game	27.74
Acculogic SIDE-4VL EIDE 16550 serial	68.24
Adaptec AVA1505 SCSI-2 CD Kit	48.32
Adaptec 2842 VLB SCSI-2	239.11
Adaptec 1542CP SCSI Master Kit	255.34
Adaptec PCI Ultra Wide SCSI Kit	301.81
Adaptec Power Storage ISA Kit	609.46
Adaptec Power Storage PCI Kit	609.46
Promise 2300+ EIDE VLB	49.57

MODEMS & COMMUNICATIONS

BOCA

Online Express 14.4 internal w/fax	46.82
Online Express 14.4 external w/fax	67.87
V.34 28.8 internal w/fax	147.46
V.34 28.8 external w/fax	209.64

Hayes

ACCURA 144 internal w/fax	79.05
ACCURA 144 external w/fax	94.51
ACCURA 288 V.34 internal w/fax	168.17
ACCURA 288 V.34 external w/fax	176.43
OPTIMA 288 V.34 internal w/fax	359.58
OPTIMA 144 external w/fax	371.72
OPTIMA 288 Business Modem	425.70

MICROCOM

DeskPorte 28.8S Fast V.34	169.52
DeskPorte 28.8P V.34	224.13

MOTOROLA

14.4 VoiceSURFR internal	61.09
14.4 VoiceSURFR external	112.86
BitSURFR ISDN adapter internal	263.97
BitSURFR ISDN adapter external	264.02
BitSURFR Pro ISDN terminal adapter	348.03
ModemSURFR V.34 internal	159.76
ModemSURFR V.34 external	169.99
OnlineSURFR V.34 Package internal	169.31
OnlineSURFR V.34 Package external	178.74

PUREDATA

SatisFAXtion 14.4 w/Winfax Pro internal	269.29
SatisFAXtion 28.8 internal	389.98

MODEMS & COMMUNICATIONS

PRACTICAL PERIPHERALS

14.4 internal w/fax	65.88
14.4 Mini Tower w/fax	79.05
V.34 28.8 internal w/fax	152.89
V.34 28.8 Mini Tower w/fax	169.99

SUPRA

Supra 288 faxmodem internal	183.34
Supra 288 faxmodem external	206.42
SupraExpress 288i PnP internal	141.13
SupraExpress 288 PnP external	163.46
Supra Simple Internet 288i internal	145.83
Supra Simple Internet 288 external	167.00

U.S. Robotics

SPORTSTER MODEMS	
14.4K internal w/fax	96.52
14.4K external w/fax	113.62
28.8K V.34 internal w/fax	169.70
28.8K V.34 external w/fax	188.19
Vi 14.4K internal w/fax & voice	97.74
Vi 14.4K external w/fax & voice	115.27
Winmodem 28.8 internal w/fax	142.75
COURIER MODEMS	
V.34 internal w/fax	342.39
V.34 external w/fax	363.19
I-modem ISDN modem internal	562.15
I-modem ISDN modem external	632.84

ZOOM

28.8 V.34 FaxModem internal	143.48
28.8 V.34 FaxModem external	159.94
14.4 V.32bis Voice Speakerphone internal	114.99
28.8 V.34 Voice Speakerphone internal	184.51

BATTERY BACKUP AND UPS

AMERICAN POWER	
Back UPS Pro 280 Plug and Play	144.01
Back UPS Pro 420 Plug and Play	233.42
Back UPS Pro 650 Plug and Play	288.63
SmartUPS 700	362.89
SmartUPS 1000	496.46
SmartUPS 1400	621.50
SurgeArrest Pro	25.89
SurgeArrest Network	29.34
SurgeArrest Network + Phone	45.21
Line-R 600	113.34
TRIPPLITE	
BC250	93.20
BC PERS 420	126.49
BC PERS 500	156.25
BC PRO 550	181.42
BC PRO 675	213.24
BC PRO 850	275.86
BC PRO 1050	309.20
TRIPPLITE SMART UPS SERIES	
SMART 280 LAN	208.68
SMART 450 LAN	252.95
SMART 675 LAN	303.95
SMART 850 LAN	379.58
SMART 1050 LAN	439.94
Isobar 4 OUTLET	38.99
Isobar 6 OUTLET	46.78

PCMCIA CARDS

3Com Etherlink III PCMCIA	156.76
3Com Etherlink IIIC combo	379.88
Adaptec APA1460 SCSI-2	169.04
Hayes EZJack 14.4 w/fax	163.46
Hayes EZJack 28.8 V.34 w/fax	219.00
Linksys Ethernet combo	135.70
Megahertz 10BT Enet adapter w/XJACK	134.03
Megahertz 28.8 V.34 data/fax w/ XJACK	259.96
Megahertz 28.8 V.34 cellular w/XJACK	269.67
Megahertz 28.8/Enet cellular w/XJACK	404.10
Motorola Montana 28.8 cellular	252.32
Motorola Marquis 28.8 data/fax & LAN	402.12
Motorola Mariner 28.8 data/fax & LAN cellular	466.52
New Media Bus Toaster SCSI-2 host	189.89
New Media Wave Jammer sound card	219.11
Simple 14.4 modem + voice	95.83
Simple 28.8 Communicator cellular	172.46
Simple 28.8 Communicator	247.79
SMC Elite Ethernet combo	169.33
USR Sportster 14.4	97.74
USR Sportster 28.8 V.34 with DataView	275.82
Xircom Ethernet 10BT	139.23
Xircom Ethernet combo	182.33
Xircom Ethernet+modem 14.4 10BT	266.19
Xircom Ethernet+modem combo	306.65
Xircom Ethernet+modem 28.8 10BT/10B2	417.33
Xircom Token Ring 16/4	409.70

CDW. WINNER OF SEVEN COMPUTER SHOPPER BEST BUY AWARDS

CDW® sells for less and services you better!™

800-865-4CDW (4239)

Visit our new redesigned web site! www.cdw.com

Call for a FREE CDW® catalog!

©1996 CDW Computer Centers, Inc

Circle 68 on reader service card

PCW1703
PC World 7/96

Since 1987 The Drive Authority

MEGAHAUS

1-800-786-1154

8:00AM - 8:00PM Mon-Fri 9:00AM - 3:00PM Sat CST

CD RECORDERS

2X CD Recorder
4X CD Reader
BEST VALUE!

- Complete PC Internal with drive, mastering software, controller, & 5 disks $849
- Complete PC External with drive, mastering software, controller, & 5 disks $949
- Complete Mac External with mastering software & 5 disks $899

4X CD Recorder
4X CD Reader
BEST PERFORMANCE!

- Complete PC Internal with drive, mastering software, controller, & 5 disks $1219
- Complete PC External with drive, mastering software, controller, & 5 disks $1319
- Complete Mac External with mastering software & 5 disks $1269

Hewlett Packard	4Xr2Xw	Complete PC Kit	$989		
Smart & Friendly	2Xr2Xw	Complete PC Kit	$829		
Pinnacle Micro	4Xr2Xw	Complete PC Kit	$909		
Yamaha bare drive	2Xr4Xw	$749	4Xr4Xw	$1119	

CD ROM DRIVES

SCSI CD ROM (add $90 for external)

Sanyo	4X	190ms	$115	Sony	4X	250ms	$129
NEC	4X	200ms	$122	Pioneer	4.4X	140ms	$169
Plextor	4.5X	130ms	$249	Teac	6X	160ms	$245
NEC	6X	150ms	$269	Plextor	6X	145ms	$289
Toshiba	6.7X	120ms	$239	Plextor	8X	145ms	$415
Toshiba	BX	145ms	$299				

IDE (ATAPI) CD ROM

Mitsumi	4X	230ms	$65	Toshiba	4X	190ms	$71
Teac	6X	110ms	$119	NEC	6X	145ms	$99
Toshiba	6X	170ms	$99	Teac	8X	110ms	$169
Toshiba	BX	145ms	$159	NEW!	10X	130ms	$289

CD ROM CHANGERS

IDE-Internal
NEC 4X 4Disk $189 NEW! 3Disk 4X $155
SCSI-External
Pioneer 4.4X DRM-624X 6 Disk 190ms 256K $319
Pioneer 4X DRM-1804X 8Disk 300ms 612K $1899

7 Drive CD ROM TOWERS (1-21 Drive towers & other brands available!)
Sony 4X $1549 NEC 4X $1489 Pioneer 4.4X $2029
NEC 6X $2679 Toshiba 6.7X $2549 Toshiba 8X $3449

REMOVABLES

OPTICAL DRIVES

230MB Fujitsu DynaMO Bare $419
230MB Fujitsu DynaMO Parallel Ext with 1 disk $439
230MB Fujitsu DynaMO PC Ext w/controller, & 1 disk $499
2.6Gig Maxoptix Int/Ext $1925/$2025
2.6Gig HP Int/Ext $2125/$2225

SYQUEST DRIVES

EZ 135MB •13.5ms, 3600rpm, 128K buffer, 3 1/2" drive
Internal IDE with disk / External SCSI with disk $190/$199
External parallel port with 1 disk $249
270MB • 13.5ms, 3600rpm, 128K buffer, 3 1/2" drive
Internal IDE (SQ3270A)/ with 1disk (S3270AC) $299/$339
External for parallel port with 1 disk $429
SCSI drive (SQ3270S)/SCSI external(S3270X) $339/$399
200MB •15.7ms, 3220rpm, 64K buffer, 5 1/4" form factor.
SCSI drive (SQ5200)/SCSI external(SQ5200CX) $339/ $399
Genuine Syquest Media Qty 2-5/5-9/10+ or with drive
44MB $48/43/40 88MB $53/48/45 105MB $56/54/51
135MB $27/24/21 200MB $79/74/71 270MB $60/58/55

IOMEGA DRIVES

100MB ZIP • 3.5" x 1" high form factor
External SCSI w/ 1 disk $199
Parallel External w/ 1 disk $199
1 Gig JAZ • 3.5" x 1" high form factor
Internal SCSI w/ 1 disk $499
External SCSI w/ 1 disk $599

Adaptec controller A1505CDKIT only $49 when purchased with Zip or Jaz drive.

TAPE DRIVES

Prices include 1 free tape! Save $10 with hard drive!

1 Gig	Seagate	$159		800MB	Seagate	$141	
1.7Gig	Seagate	$219		4.4Gig	Seagate	$259	

Parallel External for printer port 1 Gig $269

SCSI TAPE DRIVES (bare, no tape)

2Gig	HP	DAT	$609	2-4Gig	Seagate	DAT	$679
2Gig	Seagate	DAT	$599	4-8Gig	Seagate	DAT	$859
2-4Gig	Seagate	QIC	$349	4-8Gig	HP	DAT	$879
2-4Gig	HP	DAT	$699	7-14Gig	Exabyte	8mm	$1889

Look for us on the Internat at http://www.megahaus.com

Daily specials • Complete product listings
Closeout items • Plus much more

Call for our latest catalog.

HOT PRODUCTS

ExaByte 8mm EXB-8700 Tape Drive

The sleek, stand alone drive features a 7-gigabyte native, or 14-gigabyte compressed capacity, backup rate of up to 60 megabyte-per-minute. Complete backup kit includes: External drive w/ controller, cable, 1 tape, 1 cleaning tape, and a CD ROM w/ Arcada backup for DOS/WIN and your choice of Arcada for NetWare, Arcada for NT, Cheyenne for NetWare, or Palindrome backup director.

EXABYTE

$1489 alone or $1479 with hard drive purchase.
Add an Adaptec controller [A1505CDKIT] for only $49

Plug-N-Play Hard Card

Out of drive bays? Looking for an easy way to upgrade your hard drive storage capacity? This hard disk card from *Smart Storage Solutions* is the answer. Just insert the card in a 16 bit slot. It comes preformatted and will work in any 386 or higher computer.

1Gig [SSS1GIG]	$299	2Gig [SSS2GIG]	$439
1.6Gig [SSS1.6GIG]	$399	2.5Gig [SSS2.5GIG]	$499

Fixed Disk Performance
With all the Removability Advantages

MCD

3 1/2" x 1" drive, 10ms 2 year drive warranty, 5 year cartridge warranty. Compatible with SyQuest 270 media.

Internal SCSI with 1 cartridge $389
External SCSI with 1 cartridge $449
Parallel Ext with 1 cartridge $519

SCSI HARD DRIVES

SCSI	Speed	RPM	Brand	Model	Wty	Price
B50MB	14ms	4500	Quantum	TB850S	3	$195
1050MB	9ms	5400	Seagate	ST31051N	3	$349
1080MB	11ms	5400	Seagate	ST51080N	3	$235
1280MB	12ms	5400	Quantum	FB1280S	3	$276
2050MB	8.5ms	7200	Micropolis	MC4221	5	$544
2050MB	8.5ms	7200	Micropolis	MC4221AV	5	$600
2147MB	9ms	5400	Micropolis	MC4421	5	$444
2147MB	9ms	5400	Seagate	ST32151N	5	$600
2147MB	8ms	7200	Seagate	ST32550N	5	$675
2150MB	8ms	7200	Quantum	XP32150	5	$630
4290MB	8ms	7200	Seagate	ST15150N	5	$989
4290MB	9ms	5400	Seagate	ST15230N	5	$905
4294MB	8.9ms	7200	Micropolis	MC3243	5	$859
4294MB	8.9ms	7200	Micropolis	MC3243AV	5	$945
4300MB	8.6ms	7200	Quantum	XP34300	5	$900
9091MB	12ms	5400	Micropolis	MC1991	5	$1840
9091MB	12ms	5400	Micropolis	MC1991AV	5	$1959
9080MB	11ms	5400	Seagate	ST410800N	5	$1880
WIDE SCSI						
2050MB	8.9ms	7200	Micropolis	MC4221W	5	$630
2050MB	8.9ms	7200	Micropolis	MC4221WAV	5	$689
2147MB	8ms	7200	Seagate	ST32550W	5	$675
2150MB	8ms	7200	Quantum	XP32150W	5	$680
4294MB	8.9ms	7200	Micropolis	MC3243W	5	$945
4294MB	8.5ms	7200	Micropolis	MC3243WAV	5	$1035
4294MB	8ms	7200	Seagate	ST15150W	5	$1065
4300MB	8.6ms	7200	Quantum	XP34300W	5	$959
9080MB	11ms	5400	Seagate	ST410800W	5	$2029
9100MB	12ms	5400	Micropolis	MC1991W	5	$1929
9100MB	12ms	5400	Micropolis	MC1991WAV	5	$2049

SCSI CONTROLLERS

Save $10 when you purchase any SCSI controller with any SCSI drive.

ADAPTEC

Adaptec kits include controller, cable, and EZ-SCSI software to support hard drives, Optical, Removable, CD ROM.

1505	ISA 16Bit SCSI (no hard drive support)	$60
1515	ISA 16Bit SCSI	$97
1520	ISA, PIO, 10MB/s	$145
1522	ISA 16Bit SCSI, Floppy	$155
1540	Bare, ISA, Bus Master	$199
1542	ISA 16Bit Busmaster SCSI, Floppy	$270
1640	MicroChannel SCSI	$339
2742	EISA 32Bit SCSI, Floppy	$379
2842	Local Bus 32Bit SCSI, Floppy	$255
2920	PCI 32Bit SCSI (PIO)	$169
2940	PCI 32Bit SCSI (Bus Master)	$239
2940UW	PCI ULTRA WIDE SCSI	$295
T34B	Bidirectional Parallel to SCSI	$105
T35B	EPP to SCSI adapter	$139
T1460	PCMCIA type 2, 3, or 4 to SCSI	$195
A3940	Twin Channel PCI SCSI (14 Drives)	$439
A3940W	Twin Channel PCI WIDE SCSI	$529
A2B25KIT	VESA Local Bus IDE & SCSI	$135

We stock RAID controllers for PCs and Macintoshes. Call!

REMOVABLE DRIVE BRACKET

Converts any 3 1/2" hard drive into a removable drive. Great for transportability, data interchange, or security needs. Extremely high quality construction. Metal cartridge and frame, cooling fan, SCSI unit has ID select on the cartridge. Qty discounts available.

	System	Extra Cartridge	Extra Frame
IDE	$79	$39	$49
SCSI	$85	$40	$54
WIDE SCSI	$129	$64	$75

IDE HARD DRIVES

IDE	Speed	RPM	Brand	Model	Wty	Price
631MB	14ms	3800	Seagate	ST3630A	3	$170
639MB	11ms	4500	Western Digital	AC2635	3	$170
850MB	10ms	4500	Western Digital	AC2850	3	$182
850MB	14ms	4500	Quantum	TB850A	3	$185
1080MB	11ms	5400	Seagate	ST51080A	3	$196
1080MB	9.5ms	5400	Fujitsu	M1606T	3	$209
1084MB	14ms	4480	Maxtor	M71084A	2	$200
1090MB	11ms	4500	Fujitsu	M1614T	3	$195
1250MB	15ms	3600	Quantum	BF1250A	3	$200
1280MB	12ms	5400	Quantum	FB1280A	3	$216
1280MB	10ms	5200	Western Digital	AC21200A	3	$205
1282MB	10.5ms	5400	Seagate	ST51270A	3	$207
1330MB	12ms	4480	Maxtor	M71336A	3	$207
1624MB	10ms	5200	Western Digital	AC31600	3	$249
1625MB	10.5ms	5400	Seagate	ST31640A	3	$275
1626MB	12ms	4480	Maxtor	M71626AP	3	$249
1700MB	11ms	4500	Quantum	SR31700A	3	$247
2004MB	12ms	4480	Maxtor	M72004A	3	$289
2100MB	10ms	5200	Western Digital	AC32100	3	$310
2167MB	10ms	5400	Seagate	ST32140A	3	$299
2500MB	15ms	3600	Quantum	BF2500A	3	$319
2500MB	11ms	4500	Quantum	SR32550A	3	$335
2559MB	11ms	5200	Western Digital	AC32600	3	$350

IDE CONTROLLERS

Save $5 when you purchase any IDE controller with any IDE drive.

TEKRAM

DC200E, ISA, 2 IDE, 2 flop, 2 (16550) ser, 1 (EPP) par, 1 game	$40
DC2B0E, VESA, 4 IDE, 2 flop, 2 (16550) ser, 1 (EPP) par, 1 game	$55
DC2905, PCI, 4 IDE, Bus Mastering	$39
DC600CD, 16Bit ISA, 4 IDE, 2 ATAPI, caching, RAID 1	$90
DC6B0CD, 32Bit VESA Local Bus, 4 IDE, 2 ATAPI, caching, RAID 1	$109
DC690CD, 32Bit PCI Bus, 4 IDE, 2 ATAPI, caching, RAID 1	$139

GSI

GSI controllers have on board BIOS to allow any size drive to be used in any system without the use of device drivers. Will run in conjunction with other controllers.

GSI1533-1B, ISA, 2 IDE	$41
GSI1533-21, ISA, 2 IDE, 4 floppy	$53
GSI1533-32, ISA, 2 IDE, 4 floppy, 2 ser, 1 par	$100
GSI1533-4C, ISA, B IDE	$119
GSI1645-V1, VESA extender, requires GSI ISA	$74

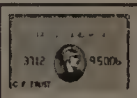
GSI VESA combo kit 1B&V1 $109 21&V1 $121
GSI VESA REQUIRES NO DEVICE DRIVERS!

Promise

EIDEMAX, ISA, 2 IDE	$36
EIDE2300+, VESA, 4 IDE, 2 flop, 2 ser, 1 par	$59
EIDE4030+, VESA, 6 IDE, 2 flop, 2 ser, 1 par, 1 game, caching	$143

Other

IDEHDCT, ISA, 2 IDE, 2 floppy	$9



DISCOVER MasterCard VISA

MegaHaus
2201 Pine Drive, Dickinson, Texas 77539
(713)534-3919 FAX (713)534-6580

Prices & specifications subject to change without notice. Shipping charges are nonrefundable. Returns must be in new condition and in original packaging. Dalaced items may not be returnable. No refunds on software or special orders (items not listed in ad.) All refunds subject to 15% restocking fee. All trademarks are registered trademarks of their respectiva companies. Personal checks held for clearance. We reserve the right to refuse any sale for any reason. Bundle price good only if sold at ad price. ©1996 MegaHaus Inc.

Circle 147 on reader service card

Sunshine Computers

File Edit Search View Mode Run Options Help

COOL SOFTWARE • COLORFUL PRINTERS

FAST NOTEBOOKS • BEST MULTIMEDIA PCs

LEASES AS LOW AS $50 a month

Ask Your Rep!

NOTEBOOKS

TOSHIBA

TECRA 720CDT
- Powerfull 133 Mhz Pentium® Intel Processor
- Screaming-fast PCI architecture and zoomed video technology that brings unprecedented video-graphics performance into the portable realm
- Expandable to 144Mb of memory
- 6xCD ROM • 28.8 Fax/Modem

CALL

SATELLITE PRO 100CS SERIES
Innovative Technology In a Value-priced Notebook

- Pentium® 75Mhz Intel Processor
- 8Mb EDO RAM expandable to 40 Mb
- 500 Mb Hard Drive
- 10.4" Dual Scan Color Display
- NIMH Battery
- Two PC Card Slots

CALL

TEXAS INSTRUMENTS

TI Extensa 550 "Awesome"

NEW EXTENSIA™ 510 AND 570 SERIES

TI 510 Pentium® 100MHz 8/810 10.4"Dual ..... CALL
TI 570CD Pent 100MHz 8/810 11.3" Dual 6XCD ..... CALL
TI 570CDT Pent 100MHz 8/1.2GB 10.4" Active 4XCD.. CALL

TRAVELMATE™ 5200

TI 5200 Pent 120MHz 8/1.2GB SVGA TFT Active $4039

TRAVELMATE™ 5300 SERIES

TI 5300 Pent 133MHz 8/1.2GB 11.3" SVGA TFT ..... CALL

NEC

The NEC Versa 2200C, the powerful value-priced notebook with the sleek "expensive" design.

NEC VERSA 2200C
- 75 Mhz Pentium® Processor • 8 Mb RAM
- 810 Mb Hard Drive
- TFT Active

$2999

NEC VERSA 4080H
- 120 Mhz Pent Processor
- 8 Mb RAM
- 1.6 Gb HD
- High Resolution

$4239

VERSA 4050C Pent 90MHz 8/810 4XCD Act $4239
VERSA 4050H Pent 90MHz 8/810 High Res $3949

IBM Premier Business Partner — Authorized Personal Computer Dealer

IBM THINKPAD 760 SERIES An award winning family of performance notebooks.

IBM THINKPAD 760E, 760EL & 760ELD SERIES

Pentium® 133MHz 16/1.08Gb 12.1" TFT ..... CALL
Pentium® 100MHz 8/810Mb 11.3" Dual ..... CALL
Pentium® 100MHz 8/810Mb 12.1" TFT 4X CD ..... CALL
Pentium® 120MHz 8/810Mb 11.3" Dual ..... CALL
Pentium® 120MHz 8/1.08Gb 12.1" TFT ..... CALL
Pentium® 133MHz 16/1.08Gb 12.1" TFT ..... CALL

IBM THINKPAD 365X & 365XD

Pentium® 100MHz 8/810Mb 10.4" Dual ..... CALL
Pentium® 100MHz 8/810Mb 10.4" Dual 4X CD ..... CALL
Pentium® 100MHz 8/810Mb 10.4" Active ..... CALL
Pentium® 120MHz 8/1.08Gb 11.3" Dual 4x CD ..... CALL
Pentium® 120MHz 8/1.08Gb 10.4" TFT 4x CD ..... CALL

AST AUTHORIZED DEALER

CALL FOR LATEST PRICING!!

ASCENTIA P SERIES

Pentium 100 Mhz 8/800 • 8/1.2 11.3" CD-ROM ..... CALL
Pentium 133 Mhz 8/800 • 8/1.2 11.3" CD-ROM ..... CALL

ASCENTIA J SERIES

Pentium 75 Mhz 8/800MB Dual $2339
Pentium 100 Mhz 8/800MB Dual $2625
Pentium 100 Mhz 8/800MB Active $3099

HEWLETT® PACKARD
Authorized Reseller

Hewlett Packard Omnibook 5000

HEWLETT PACKARD 200 LX SERIES

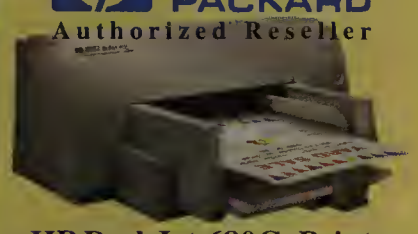
HP PALM TOP 200LX PCs 1MEG $489
HP PALM TOP 200LX PCs 2MEG $619

HEWLETT PACKARD OMNIBOOK 5000/5500 SERIES

HP 5000CT Pentium® 90MHz 8/810 Active Notebook PCs $3965
HP 5000CT Pentium® 90MHz 8/1.2GB VGA Notebook PCs $4045
HP 5000CTS Pentium® 90MHz 16/1.2GB SVGA Notebook PCs $4575
HP 5000CTS Pent 120MHZ 16/1.2GB SVGA Notebook PCs $4795
HP 5500CS Pent 100MHZ 8/810 11.3" SVGA Dual Notebook PCs ..... CALL
HP 5500CTS Pent 120MHZ 16/1.3GB 10.4" SVGA TFT Notebook PCs ..... CALL
HP 5500CTS Pent 133MHZ 16/1.3GB 12.1" SVGA TFT Notebook PCs ..... CALL

PRINTERS

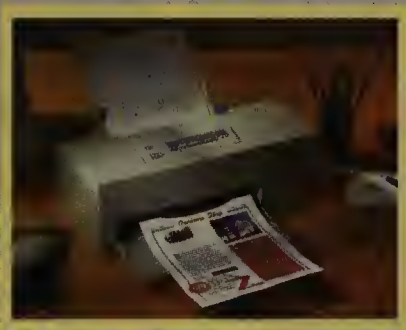
HEWLETT® PACKARD
Authorized Reseller



HP DeskJet 680C Printer

PRINTERS

HP LaserJet 5L-FS Printer $479
HP LaserJet 5P Printer $849
HP LaserJet 5MP Printer $999
HP DeskJet 340 Printer $289
HP DeskJet 340CV Printer $325
HP DeskJet 340CM Printer $305
HP DeskJet 600C Printer $245
HP DeskJet 680C Printer* $305
HP DeskJet 820CXI Printer $379
HP DeskJet 855CXI Printer $469
HP DeskJet 1600 Printer $1305
HP DeskJet 1600CM Printer $1899
HP OfficeJet LX Printer, Fax, Copier, Scanner ..... CALL
HP CopyJet Color Printer Copier ..... CALL
*Prints Banners



EPSON®

Stylus Color II $299
Stylus Color IIS $205
Stylus Color Pro $499
Stylus Color ProXL $1799
LX 300 ..... $165
LQ 570+ $245
LQ 870 ..... $439
LQ 1070+ $379
LQ 1170 ..... $679
LQ 2170 ..... $599
LQ 2550 ..... $965
FX 870/FX 1170 ..... $285/$375
FX 2170 ..... $499
Stylus 1500 ..... $995

MONITORS

NEC

JC-14WIVMA - C400 14" $285
JC-15WIVMA - C500 15" $379
JC-1571VMA - 15XV 15+" $469
JC-1734VMA1 - 17XV 17+" $795
JC-1733VMA - 17XE 17" $995
JC-2131VMA - 21XE 21" ..... CALL
JC-1743UMA - 17 XP 17" $1029
JC-2143UMA - 21XP 21" ..... CALL

MAG INNOVISION

Mag Innovision DX1595 - 15" $375
Mag Innovision DX1795 - 17" $649
Mag Innovision DX15T - 15" $409
Mag Innovision MXP17F -17" $829
Mag Innovision MX21F - 21" $1489

CTX

1562CLR 15" $329
1765GME 17" $619
1785GME 17" $675
2185S 21" $1559

Viewsonic

15GA W/Speakers $469
15GS $405
17GS $639
17GA W/Speakers $719
17EA W/Speakers $639
20G $1159
VS 21 PS2 ..... $1579

SONY

CPD - 15 SXI -15" $409
CPD - 15 SF2 -15" $465
CPD - 17 SF2 -17" $849
GDM -17 SE2T -17" $965
CPD -20SF2 - 20" ..... CALL

SAMSUNG

CMB5477L 15GLI 15" $405
CMA5377L 15GLe 15" $365
CMH7379L 17GLSI 17" $799
CMG7377L 17GLI 17" $649
CMG7387L 17GNe 17" $629
CFG9637L 20GLS 20" $1159

CD-ROMS/PCMCIAS

ALPS

P/N# 03-104080-00
Internal CD-ROM Changer $299.99

NEC

P/N# CDR-C251 4x4 CD Changer $289
P/N# CDR-C302 - 4XC $345
P/N# CDR-502 - 6XI $249
P/N# CDR-602 - 6XE $345

SONY

CSD-760S 4X Intl SCSI CD ROM Kit $159
CSD-76SB 4X Int CD ROM Drive .. $139
CSD-7611M 4X Ext CD ROM $289

Megahertz

XJ4428 - 28.8 X-Cellular Modem $289
XJ2288 - 28.8 X-Jack Modem ..... CALL
XJ3288 28.8/14.4X-Jack ..... CALL
XJ3288M 28.8/14.4X-Jack Cellular cable ..... CALL
XJEM3288T 10 BASE T X-Jack ..... CALL
XJEM3288C 10 BASE T &10 BASE 2 X-Jack. CALL

U.S. Robotics®

000840-0 - Sportster 28.8 V.34 Int Fax Modem $179
001013-0 - Sportster 28.8 PCMCIA Fax Modem $299
000839-0 - Sportster 28.8 V.34 Ext Modem. $199
001171-0 - Sportster 28.8 Fax Mdm w/personal Vmail $199
001125-0 - Sportster 28.8 Internal Modem .. $159

MOTOROLA

Montana 28.8 PCMCIA Modem/Fax Card w/cell $259
Mariner 28.8 PCMCIA Modem/Fax Lan Adapter w/cell $419
Modem Surfer™ Fax Modem Internal $155
Modem Surfer™ Fax Modem External $169

Sunshine Computers

A Division Of INNOVATION COMPUTERS

Come and visit our NEW 30,000 sq ft Superstore in Deerfield Beach, Florida!
OPEN 7 DAYS A WEEK

1240 East Newport Center Dr.
Deerfield Beach, Florida 33442

1-800-828-2992

Hours: M-F 8am-8pm EST • Sat 10-6 • Sun 12-5

LEASES AS LOW AS $50 a month

LOOK FOR US ON THE World Wide Web http://www.sunshinec.com

FAX YOUR ORDER (954)422-5894 | OUTSIDE USA: (954)422-9680 | INTERNET: ginog@gate.net | WWW: http://www.sunshinec.com

THE FOLLOWING ALSO APPLIES: All items carry full manufacturers' warranty • All item are new and factory sealed • 15 day return policy & 30-day exchange • All items returned must include original packaging and documentation • No returns without RMA number • Shipping and handling are non refundable • Not responsible for typographical or printing errors • Software is not returnable • All printers sre non refundable

Attention: Due To On-Going Price Updates of Notebook & Laptop Computers... CALL For Current Pricing and Availability

PCW 0796

Circle 196 on reader service card

USA FLEX

DISCOUNT PRICES on over 20,000 computer products

✓Notebooks ✓Desktops ✓Printers & Scanners ✓Networking ✓Software ✓Video ✓Multimedia

New Lower Price!

BJC-610 Bubble Jet Printer™

Only $469

Near photographic color output at 720x720 dpi, free 2-year Instant Exchange warranty and toll-free support. Separate ink cartridges for no-waste ink system, print hi-res color on paper and even fabric with Canon Creative CD-ROM (included). Microsoft® Windows® Printing System.

BJC-610

Canon

What Can You Do with a Canon Printer ? ? ?

Canon Creative CD-ROM is included on Canon Color Bubble Jet Printer models BJC-610 and BJC-4100. Creating your own greeting cards, stickers, T-shirts and more was never so fun or easy!

BJC-4100 Bubble Jet Printer™

Only $299

Finally, a business printer you can have fun with! It does great looking impressions at 720x360 dpi in both color and black on plain paper. Includes Canon Creative CD-ROM.

BJC-4100

HEWLETT PACKARD Authorized Reseller

The printer that goes anywhere.

HP DeskJet 320 Printer Bundle

Includes HP DeskJet 320 Printer 600x300 dpi, 3 ppm, 60-page Sheet Feeder, and Color Kit.

C2637A

Special printer bundle! Only $199*

* $199 when purchased with any notebook from USA Flex
$219 when purchased separately.

Monitors/Video Cards

NEC

14" MultiSync C400	$299
15" MultiSync C500	$389
15" MultiSync M500	$599
15" MultiSync XV15+	$469
17" MultiSync XV17+	$799
21" MultiSync XE21	$1767
17" MultiSync XP17	$1027
21" MultiSync XP21	$2137

PRINCETON GRAPHICS

PG5 14"	$259
PG5 15"	$369
PG5 17"	$649

SONY

14" CPD-1425	$299
15" CPD-155X1	$429
Multiscan 155FII	$499
Multiscan 175FII	$879
Multiscan 175EII	$1004*
Multiscan 205FII	$1699*

*Price after instant rebate

CTX

14" 1451C-1	$249
14" 1451CLR-1	$255
15" 1565D1-1	$369
17" 1765GME-1	$669
17" 1785GME-1	$739
20" 2085-1	$1199

PANASONIC

15" PanaSync E15	$349
15" PanaSync/Pro P15	$429
17" PanaSync 517	$729
17" PanaSyncC 1792P	$749
21" PanaSync C2192P	$1679

MAG INNOVISION

14" DX1495	$269
15" DX1595	$379
17" DX1795	$709
17" MXP17F	$859
21" MX21F	$1699

Scanners

HEWLETT-PACKARD

HP ScanJet 4S Scanner	$289
NEW HP ScanJet 4P Scanner (color/greyscale)	$499
HP ScanJet 4C Scanner (color)	$949

MICROTEK

Scanmaker E3	$379
PageWiz	$199

EPSON

ES3006S	$339
ES1000C	$699
ES1200C	$1119

Multimedia/CD ROM

NEC

MultiSpin 4Xc 4 Disk Changer	$269
MultiSpin 4Xc 7 Disk Changer	$339
MultiSpin 6Xi	$339
MultiSpin 6Xe	$489

PANASONIC

Panasonic 4X, 5 Disk CD-ROM Changer	$299
Panasonic Ext. 4X CD-ROM Drive	$329
Panasonic Portable 4X CD-ROM Drive	$399
Panasonic Portable 4X CD-ROM Drive w/Sound	$599

CREATIVE LABS

8Blaster CD 8X PnP	$249
SoundBlaster Value CD 4X PnP	$249
Discovery CD 8X	$379
SoundBlaster Performance 8X PnP	$449
SoundBlaster 16 Value IDE PnP	$99
SoundBlaster AWE 32 PnP	$249
SoundBlaster 32 PnP	$169
Advanced Signal Proc Upgrade Kit	$55
Wave Blaster II	$119

PLEXTOR

PX-63CX 6X CD-ROM	$319
PX-65CS 6X CD-ROM External	$399

PLAY

Snappy Video Capture	$199

SONY

SRS-PC40 Speakers	$75
SRS-PC91	$139
SRS-PC3000 Speakers	$199
CSD 760S (Quad 5CSt) CD-ROM	$249

Desktops Systems

NEC

PowerMate Ve, Pentium 75, 8MB RAM, 635MB HD, Desktop	CALL
PowerMate Ve, Pentium 100, 8MB RAM, 1.2GB HD, Desktop	CALL
PowerMate V, Pentium 100, 16MB RAM, 1.2GB HD, Desktop, 4X	$2,119
PowerMate V, Pentium 100, 16MB RAM, 1.2GB HD, Mid-Tower, 4X	$2,129
PowerMate V, Pentium 100, 16MB RAM, 1.6GB HD, Mid-Tower, 6X	$2,199
PowerMate P, Pentium 133, 16MB EDO RAM, 1.2GB HD, Mid-Tower, 4X	$2,499
PowerMate P, Pentium 166, 16MB EDO RAM, 2.0GB HD, Mid-Tower, 6X	$3,119

AST

Advantage! 623, Pentium 100, 8MB RAM, 1.2GB HD, Desktop w/ Monitor	$1,889
Advantage! 625, Pentium 133, 8MB RAM, 1.2GB HD, Desktop, 4X	$1,999
Advantage! 821, Pentium 100, 8MB RAM, 1.2GB HD, Mid-tower, 6X	$1,899
Advantage! 823 Pentium 133, 8MB RAM, 1.6GB HD, Mid-tower, 6X	$2,179
Advantage! 824 Pentium 133, 16MB RAM, 1.6GB HD, Mid-tower, 6X	$2,299
Advantage! 828 Pentium 166, 16MB RAM, 2.1GB HD, Mid-tower, 6X	$2,899

Models do not include monitor unless otherwise stated.

Modems/PC Cards

MEGAHERTZ

PC Card 28.8/14.4 w/X Jack connector	$289
PC Card 28.8/14.4 w/X Jack connector w/cable	$289
PC Card 28.8 Ethernet Modem	
10Base-T w/X Jack connector	$429
10Base-T w/cable connector	$429
10Base-T and 10Base-2 w/X Jack connector	$449
10Base-T and 10Base-2 w/cable connector	$449
PC Card 28.8/14.4 Cellular Capable Fax/Modem	
XJ4288	$299
CC4288	$299

PRACTICAL PERIPHERALS

14.4/14.4 Data/Fax int/ext	$65/$79
V.34 28.8/14.4 Data/Fax int/ext	$155/$169
ProClass PC Card 28.8/14.4	$279
ProClass PC Card 28.8/14.4 w/EZ Port retractable RJ-11 connector	$279

HAYES

PC Card Optima 28.8 V.34 +FAX 14.4 with EZJack™	$239
ACCURA 144+FAX144 int/ext	$79/$89
ACCURA 288V.FC+FAX int/ext	$169/$199
OPTIMA 14.4 Business modem w/Voice Mail Ext	$369
OPTIMA 28.8 Business modem w/Voice Mail Ext	$429
OPTIMA 288 V.FC+FAX int/ext	$369/$429
ESP Communications Accelerator	$75

US ROBOTICS

Sportster 14.4 Data/Fax Plug-n-Play Int/Ext	$91/$107
Sportster 14.4 PC Card	$95
Sportster 28.8 Plug-n-Play Int/Extl	$185/$199
Sportster Voice 28.8/14.4 w/Voice Mail	$215
Sportster Vi 28.8 DSVD	$279
Sportster 28.8 PC Card Plug-n-Play w/Data View	$289
Sportster Winmodem	$135
Courier V. Everything Int/Ext	$339/$359
Courier 28.8 PC w/Data View	$339

Printers...Laser/Ink Jet/Dot Matrix

HP PRINTERS

HP DeskJet 340 Printer Bundle w/ Color, Battery	$309
HP DeskJet 600C/660C/850C Printer	$239/$339/$489
HP DeskJet 1600C/CM Printer	$1299/$1899
HP LaserJet 5L-FS/5P Printer	$489/$849
HP OfficeJet Printer/Fax/Copier Value Pack	$509
HP Fax 700 Fax/Copier Value Pack	$499

EPSON

LX300	$169
LX300 w/ Color Kit	$215
LQ-570+/1070+	$245/$385
FX-870/1170/2170	$289/$379/$499
LQ-870/2170	$447/$599
DFX-5000+/8000	$1395/$2329
Stylus Color IIs	$169*
Stylus Color II	$269*
Stylus Pro	$499
Stylus 1500	$995
Stylus Pro XL	$1799

*Price after $30 Mail-In Rebate

BROTHER

WL-660	$399
HL-960	$989
MFC-4000 ML	$799
MFC-4500 ML	$959

TI PRINTERS

microLaser WIN/4	$379
microLaser 600	$679
microLaser PowerPro/12	$1199

Unbelievable prices

OKIDATA PRINTERS

OL600e	$399
OL610e	$519
OL810E	$799
ML320/ML321	$319/$449
ML590/ML591	$449/$609
Okijet 2010	$339

CANON

BJC-210	$199
BJ-230 wide carriage	$384
BJC-70	$349
BJC-4100	$299
BJC-610	$469

New lower prices

LEXMARK

Winwriter 150C	$279
Color Jetprinter 1020	$209
Color Jetprinter 2070	$399
Optra E	$549
4039 10Plus	$1089
Optra R+/OptraR1+	$1399/$1599
Optra Lx+	$1959
Optra Lxi+	$2639
Optra C Color Laser	$5999

New lower prices

PANASONIC PRINTERS

KX-P6100	$369
KX-P6500	$419
KX-P1150/P2023	$135/$179
KX-P3124	$315
KX-P3626	$389

Notebook Computers

TOSHIBA ENCORE

A Value Worthy of a Standing Ovation

Toshiba Certified Remanufactured Notebooks For Less from USA FLEX . . . Your Authorized Toshiba Encore Dealer!

Full 1 Year Warranty on all Toshiba Encore Products!

Satellite

T2110CS features Intel 486 DX4-75MHz processor, 10.4" Color Dual Scan Display, 350MB HD, 4MB RAM (Max. 28MB). $999
T2115CS features Intel 486 DX4-75MHz processor, 10.4" Color Dual Scan Display, 350MB HD, 4MB RAM (Max. 28MB). With MS-DOS and Win 3.11 OR With Win 95 Your choice, only $999
T100CS features Intel Pentium 75MHz processor, 10.4" Color Dual Scan Display, 504MB HD, 8MB RAM (Max. 40MB). $1799
T105CS features Intel Pentium 75MHz processor, 10.4" Color Dual Scan Display, 504MB HD, 8MB RAM (Max. 40MB). $1799
T2150CDT features Intel 486 DX4-75MHz processor, 10.4" Color Active Matrix Display, 500MB HD, 8MB RAM (Max. 32MB). $2499

Satellite Pro™

T2135CS features Intel 486 DX4-75MHz processor, 10.4" Color Dual Scan Display, 520MB HD, 8MB RAM (Max. 32MB). With MS-DOS/Win 3.11 OR With Win 95. Your choice, only $1399
T2155CDS features Intel 486 DX4-75MHz processor, 10.4" Color Dual Scan Display, 520MB HD, 4MB RAM (Max. 28MB), CD-ROM Drive. With MS-DOS/Win 3.11 OR With Win 95. Your choice, only $1599
400CS features Intel Pentium 75MHz processor, 10.4" Color Dual Scan Display, 810MB HD, 8MB RAM (Max. 40MB) With MS-DOS and Win 3.11 OR With Win 95. Your choice $2499
410CS features Intel Pentium 90MHz processor, 11.3" Color Dual Scan Display, 810MB HD, 8MB RAM (Max. 40MB) Includes DOS/Win 3.11. $2899
410CDT features Intel Pentium 90MHz processor, 11.3" Color Active Matrix Display, 810MB HD, 8MB RAM (Max. 40MB), CD-ROM Drive. Includes DOS/Wins 3.11. $4099

PORTÉGÉ

610CT features Intel Pentium 90MHz processor, 9.5" Color Active Matrix Display, 720MB HD, 8MB RAM (Max. 40MB) Includes Wins 95. $3599

TECRA™

700CS features Intel Pentium 120MHz processor, 11.3" Color Dual Scan Display, 1.2GB HD, 8MB RAM (Max. 40MB). Includes Win 95. $3599
700CT features Intel Pentium 120MHz processor, 11.3" Color Active Matrix Display, 1.2GB HD, 16MB RAM (Max. 48MB). Includes Win 95. $4599

Call Today! Quantities Limited! Prices Subject to Change.

TOSHIBA

Satellite 100CS Pentium 75, Dual Scan, 528MB	$1969
Satellite Pro 410CS, Pentium 90, Dual Scan, 810MB	$3199
Satellite Pro 410CT Pentium 90, Act. Color, 810MB	$4399
Portege 610CT, Pentium 90, Active Color, 720MB	$3889
Tecra 700CS, Pentium 120, Dual Scan, 1.2GB	$3999
Tecra 700CT, Pentium 120, Active Color, 1.2GB	$4999
NEW Tecra 710CDT Pentium 133, 12.1 Active Color, 1.2GB, 6x CD-ROM, 28.8 Modem	$6879
NEW Tecra 720CDT Pentium 133, 12.1 Active Color, 1.2GB, 6x CD-ROM, 28.8 Modem	$7429

TEXAS INSTRUMENTS

EXTENSA 560CD Pentium 75, 10.4" Dual Scan 810MB	$2699
EXTENSA 560CDT Pentium 75, 10.4" Active 1.2GB	$3679
TI5100 Pentium 90, 10.4" SVGA Color 1.2GB	$3379
TI5200 Pentium 120, 10.4" SVGA Color 1.2GB	$4649
TI5300 Pentium 133, 11.3" SVGA Color 1.2GB	$5329

TI Performance Pay-Off Promotion
Save $450 on a genuine TI 8MB RAM Option Kit (Part # 9798816-0001R) or save $300 on a TI DockMate NetReady docking station (Part #9794572-0001R)
Offer good with purchase of TM5200 or TM5300 Notebook.

NEC

VERSA 550D 5x86-100MHz, 10.4" Dual Scan, 540MB	$1799
VERSA 2200C Pentium 75, 9.5" Active Color 810MB	$2449
VERSA 2205C Pent. 75, 9.5" Active Color 810MB, 14.4 Modem	$2499
VERSA 4000C Pentium 75 Active Color 810MB 4X CD-ROM	$3799
VERSA 4050C Pentium 90 Active Color 810MB 4X CD-ROM	$4499
VERSA 4050H Pentium 90 Hi-Res Color 810MB	$4499
VERSA 4080H Pentium 120 Hi-Res Color 1.0GB	$4999

IBM ThinkPad

365E 5X86, 10.4" Dual Scan, 540MB	$1999
365ED 5X86, 10.4" Dual Scan, 540MB, 4XCD	$2499
365XD Pentium 100, 10.4" Dual Scan, 810MB, 4XCD	$2949
365X Pentium 100, 10.4" Dual Scan, 810MB	$2649
365X Pentium 100, 10.4" Active, 810MB	$3049
365XD Pentium 120, 10.4" Active, 1.08GB, 4XCD	$3899
365XD Pentium 120, 11.3" Dual Scan, 1.08GB, 4XCD	$3499
760ED Pentium 133, 12.1" Active, 1.2GB, 4X CD	$6999
760E Pentium 120, 12.1" Active, 1.2GB	$5299
760E Pentium 133, 12.1" Active, 1.08GB	$5999
760E Pentium 120, 12.1" Active, 810MB	$4999
760EL Pentium 133, 12.1" Active, 1.08GB	$5499
760EL Pentium 120, 12.1" Active, 1.08GB	$4899
760ELD Pentium 100, 12.1" Active, 810MB, 4XCD	$4499
760EL Pentium 120, 11.3" Dual Scan, 810MB	$3599
760EL Pentium 100, 11.3" Dual Scan, 810MB	$3399

USA FLEX

To order, call...

1-800-876-5606

USA Flex, Inc., 444 Scott Dr., Bloomingdale, IL 60108

Code # WD0606 Please refer to this code when ordering.

Circle 231 on reader service card

Federal Express® Delivery Service Available

FedEx

No Surcharge On These Credit Cards

MasterCard VISA DISCOVER NOVUS

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1262 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD
Subscription Department
P.O. Box 51833
Boulder, Colorado 80323-1833

Please Accept Your FREE GIFT!

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1262 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD
Subscription Department
P.O. Box 51833
Boulder, CO 80323-1833

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

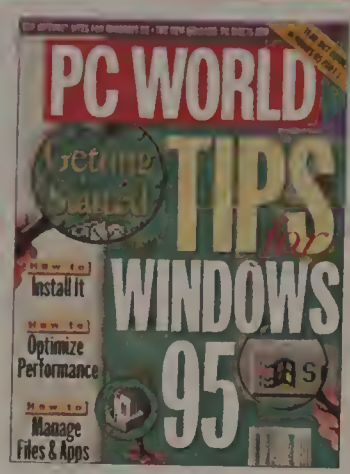
BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1262 BOULDER, CO

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD
Subscription Department
P.O. Box 51833
Boulder, CO 80323-1833

PC WORLD SAVINGS VOUCHER

58% OFF



Annual Cover Price	Your One-Year Rate	PLUS Your Free Bonus
$59.40	$24.95	Windows 95 Tips Mouse Pad

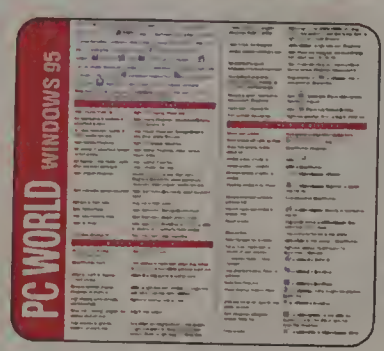
☐ **YES. I want to get PC WORLD for less than $2.08 per issue and save 58% off the cover price. Plus, I'll get the exclusive PC WORLD Instant Reference mouse pad—complete with the most helpful tips for working with Windows 95—FREE with my order.**

NAME

COMPANY

ADDRESS

CITY/STATE/ZIP



FREE

Special Bonus: PC WORLD Windows 95 tips mouse pad

Mail this card or
call 800-825-7595 ext. 501–Fax 415-882-0936

Savings based on annual newsstand price of $59.40. Please allow 6 to 8 weeks for delivery of your first issue. Foreign orders add $46 postage. Canadian orders add $20 postage plus 7% GST (R124669680).

4MJL1

PC WORLD

58% Savings Plus a Free CD

☐ **Yes.** Send me PC WORLD and my free PC WORLD *Shareware CD-ROM*! I'll pay just $24.95 for 12 monthly issues–58% off the annual newsstand rate.

Also, please rush my FREE CD-ROM!

NAME

COMPANY

ADDRESS

CITY / STATE / ZIP

Please allow 6-8 weeks for delivery of your first issue. Canadian and Mexican orders please add $20 USD per subscription for postage plus 7% GST (#R124669680). All other countries send $65.97 USD to PC World, P.O. Box 55029, Boulder CO 80322-5029. Printed in the USA. Savings based on newsstand rate of $59.40.

4MJN6

PC WORLD Shareware CD-ROM

Loaded with over 100 great Shareware programs-including complete applications, add-ons, utilities, internet tools and the best in shareware games. This CD-ROM is yours absolutely FREE!

PC WORLD

IT'S LIKE GETTING

7 FREE ISSUES

☐ **YES! Send me PC WORLD and my free mouse pad!** I'll pay only $24.95 for 12 monthly issues — 58% off the annual newsstand rate, *the equivalent of almost 7 free issues.* Also, rush my free Internet Glossary mouse pad.

NAME

COMPANY

ADDRESS

CITY STATE ZIP

Mail this card or call 800-825-7595 x501
Quick Fax: 415-882-0936

4MJQ0

Please allow 6-8 weeks for delivery of your first issue. Savings based on annual cover price of $59.40. Foreign orders add $46 postage. Canadian orders add $20 postage plus 7% GST.

FREE MOUSE PAD

ALL NEW... PC World's exclusive Internet Glossary Mouse Pad. This fun and practical mouse pad helps you get the most from your time online by putting popular Internet terms and definitions right at your fingertips.

FREE PRODUCT INFORMATION PC WORLD

NAME

TITLE

COMPANY

ADDRESS

CITY STATE ZIP

PHONE ( ) FAX ( )

INFORMATION FROM ADVERTISERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520

☐ Check here for a 1-year (12 issue) subscription (U.S. only). You will be billed $19.97.

Circle the number corresponding to the product or product category you need to know more about. Mail or fax the completed card today. Manufacturers will send product information directly to you. Fax to (413) 637-4343.

PRODUCTS FEATURED IN EDITORIAL

601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700
701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800
801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900

PRODUCT CATEGORY INFORMATION

7/96

For information on all of the products mentioned in an article or an entire category of advertised products, circle the appropriate number below.

Editorial Features (see article for numbers)

901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920

Advertised Products

951 Desktop computers
952 Notebook computers
953 Windows 95 software
954 Monitors and video boards
955 Accounting software
956 Graphics software
957 Network/sharing products
958 Printers
959 Multimedia products
960 Utilities
961 Mail order companies
962 Storage devices

July 1996 This card expires November 19, 1996 S1

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

Free Product Information

For quicker response, fax to (413) 637-4343.

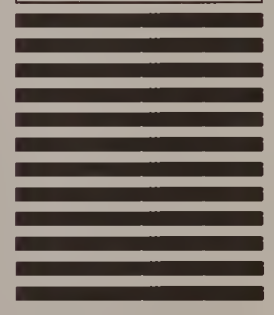
BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 758 PITTSFIELD, MA

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD

Product Information Center
P.O. Box 5330
Pittsfield, MA 01203-9871



FREE PRODUCT INFORMATION PC WORLD

NAME

TITLE

COMPANY

ADDRESS

CITY STATE ZIP

PHONE ( ) FAX ( )

INFORMATION FROM ADVERTISERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520

☐ Check here for a 1-year (12 issue) subscription (U.S. only). You will be billed $19.97.

Circle the number corresponding to the product or product category you need to know more about. Mail or fax the completed card today. Manufacturers will send product information directly to you. Fax to (413) 637-4343.

PRODUCTS FEATURED IN EDITORIAL

601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700
701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800
801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900

PRODUCT CATEGORY INFORMATION

7/96

For information on all of the products mentioned in an article or an entire category of advertised products, circle the appropriate number below.

Editorial Features (see article for numbers)

901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920

Advertised Products

951 Desktop computers
952 Notebook computers
953 Windows 95 software
954 Monitors and video boards
955 Accounting software
956 Graphics software
957 Network/sharing products
958 Printers
959 Multimedia products
960 Utilities
961 Mail order companies
962 Storage devices

July 1996 This card expires November 19, 1996 S3

Free Product Information

For quicker response, fax to (413) 637-4343.

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 758 PITTSFIELD, MA

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD

Product Information Center
P.O. Box 5330
Pittsfield, MA 01203-9871

FREE PRODUCT INFORMATION PC WORLD

NAME

TITLE

COMPANY

ADDRESS

CITY STATE ZIP

PHONE ( ) FAX ( )

INFORMATION FROM ADVERTISERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520

☐ Check here for a 1-year (12 issue) subscription (U.S. only). You will be billed $19.97.

Circle the number corresponding to the product or product category you need to know more about. Mail or fax the completed card today. Manufacturers will send product information directly to you. Fax to (413) 637-4343.

PRODUCTS FEATURED IN EDITORIAL

601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700
701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800
801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900

PRODUCT CATEGORY INFORMATION

7/96

For information on all of the products mentioned in an article or an entire category of advertised products, circle the appropriate number below.

Editorial Features (see article for numbers)

901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920

Advertised Products

951 Desktop computers
952 Notebook computers
953 Windows 95 software
954 Monitors and video boards
955 Accounting software
956 Graphics software
957 Network/sharing products
958 Printers
959 Multimedia products
960 Utilities
961 Mail order companies
962 Storage devices

July 1996 This card expires November 19, 1996 S2

Free Product Information

For quicker response, fax to (413) 637-4343.

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 758 PITTSFIELD, MA

POSTAGE WILL BE PAID BY ADDRESSEE

PC WORLD

Product Information Center
P.O. Box 5330
Pittsfield, MA 01203-9871

PC WORLD

PRESIDENT & COO Richard J. Marino

Assistant to the President & COO Colette Cornish

PUBLISHER J. Samuel Huey

ADVERTISING SALES

Vice President, Associate Publisher
Jeff Edman

Business Manager
Patricia Owen

Director of Advertising
Bob Carrigan

Assistant to the Director of Advertising
Jane Davey

Director of National Accounts
Sandy Schackman (214/233-3491)

EAST

Eastern Advertising Director
Bob Ostrow (508/820-0440)

Administrative Assistant/Office Manager
Ellen Sanderson

Mid-Atlantic/Manhattan/Eastern Canada
John Grogan, Mid-Atlantic Advertising Manager (201/587-0090)

Wayne Silverman, Account Manager (201/587-0090)

New England/Ohio
Michael Carroll, Senior Account Manager (508/820-0440)

Southeast
Judy Sutter, Senior Account Manager (770/394-0758)

MIDWEST/TEXAS

Midwest Advertising Director
Harvey Diamond (214/233-3492)

Administrative Assistant Janine Goble

Midwest
Kathy McKay, Account Manager (847/827-4477)

WEST

San Francisco Bay Area (area code 415 & 510)
Corinne Cox, Senior Account Manager (415/243-0500)

Silicon Valley (area code 408)/Oregon
William M. Giller, Senior Account Manager (415/243-0500)

Fremont, CA/Silicon Valley
Kevin Normandeau, Account Manager (415/243-0500)

West
Duane Hampson, Account Representative (415/243-0500)

Southern California (San Diego), Colorado/Idaho/Nevada/Utah/New Mexico/Arizona
Lisa Zimmerer, Senior Account Manager (714/250-8081)

Los Angeles/Orange County/Washington/Montana/Wyoming/Western Canada
Bill Hanck, Senior Account Manager (310/312-8008)

CONSUMER ADVERTISING SALES

Michigan/Pennsylvania/Ohio
Hartle & Heth (810/642-7273)

PC WORLD ONLINE SALES

Director of Market Development
Stephen Shore (415/267-4595)

PC WORLD MARKETPLACE
PC WORLD ACTION CARDS

Director
Pat Fales (203/857-5115)

Eastern Account Manager
Katherine Noto (203/857-5101)

Western Account Manager
Renick Morris (203/857-5102)

PC WORLD REPRINTS

Kyle Mork (612/582-3810)

PC WORLD MARKETING

Director of Marketing Alan Abrams

Public Relations Manager Lee Doyle

Marketing Manager Sandy Wong

Administrative Assistant for Marketing and Research Kecia Nordgren

CIRCULATION, RESEARCH

Vice President, Circulation
Shawne Burke Pecar

Assistant to the Vice President
Ann Dempsey

Senior Promotion Manager
Ellen DiMatteo

Circulation Business Manager
David Cobb

Single Copy Sales Manager
Cheryl Stephenson

Billing & Renewal Manager Lisa Radler

Promotion Managers Richard McCarthy, Shira Weisbach

Circulation Assistant Jennifer Carson

Customer Service Specialist
Daniella Zucker

Vice President, Research Cheryl Brink

Research Manager Jocelyn Ritchie

Research Analyst Jon Friesch

PRODUCTION

Vice President, Manufacturing
Linda Manes Goodwin

Senior Production Manager
Nadia Maudsley

Advertising Information Manager
Mike Wallace

Assistant Production Managers
Kathy Badertscher, Nancy Jonathans

Advertising Production Coordinator
Anne Merkelson

Advertising Information Assistant
Dan Gordon

HUMAN RESOURCES AND INFORMATION SYSTEMS

Vice President Richard Willoughby

Manager Thalia Ohara

Representative Christine Selfridge

Director Network Systems
Norman Noble

Senior Member, Technical Staff
Rodney Barnes

Members, Technical Staff
Pearl Chan, Stan Erhart

ADMINISTRATION

Vice President, CFO Vicki Peilen

Corporate Business Manager
Christina Spence

Accounting/Operations Manager
Pat Murphy

Accounting/Facilities Manager
Michelle Reyes

Director of Financial Operations
Madeleine Buckingham

Assistant to the CEO Nancy L. Jacobs

Management Associates
Michael L. Bayle, Peter Keith, Ulla McGee

Advertiser Index A-Z

Get more information—circle the appropriate number on the reader service card.

Reader Service Number		Page Number
4	3M Data Storage	206-207
7	3M Visual Systems	81
–	Acer Direct	52-54
–	Acer Direct	222
–	Adaptec	218
–	ADI	165
32	Adobe Systems	216
12	Adobe Systems, Inc.	168-169
14	AEC	255
9	ALR	15
27	AMS Inc.	235
45	APC	72-73
8	Arlington Computer Products	288-289
24	Aura Systems, Inc.	214
–	Austin/IPC Technologies	158A-D
15	Avery	220
40	Caere Corp.	129
91	Caere Corp.	155
–	Canon Computer Systems	2-3
–	Canon U.S.A-Graphics Systems	103
–	Casio, Inc.	259
–	Claris	230
–	Compaq Direct Plus	69
–	Compaq Direct Plus	71
33	CompuServe	251
68	Computer Discount Warehouse	296-299
86	Connectix	267
29	Connectix	269
70	Corel Corporation	201
78	Corel Corporation	203
48	Corel Corporation	309
63	Corel Corporation	313
49	Corel Corporation	315
76	Corel Corporation	317
56	Creative Labs	161
59	Creative Labs	163
74	CTX Int'l	173
66	Cyrix Systems Direct	143-145
77	DacEasy	257
79	DataStorm	249
80	Decisive Technology	250C
–	Dell	30-31
–	Dell	82-83
–	Dell	110-111
–	Dell	135
–	Dell	152-153

PC World is a publication of International Data Group, the world's largest publisher of computer-related information and the leading global provider of information services on information technology. International Data Group publishes over 190 computer publications in 62 countries. Forty million people read one or more International Data Group publications each month. International Data Group's publications include: **ARGENTINA**'s Computerworld Argentina, Infoworld Argentina; **ASIA**'s Computerworld Hong Kong, Computerworld Malaysia, Computerworld Southeast Asia, PC World Hong Kong, PC World Malaysia, PC World Singapore; **AUSTRALIA**'s Australian Macworld, Australian PC World, Computerworld Australia, IDG Sources, Network World, Reseller; **AUSTRIA**'s Computerwelt Oesterreich, PC Test; **BRAZIL**'s Computerworld, Mundo IBM, Mundo Unix, PC World, Publish; **BULGARIA**'s Computerworld Bulgaria, Ediworld, PC & Mac World Bulgaria; **CANADA**'s Direct Access, Graduate Computerworld, InfoCanada, Network World Canada; **CHILE**'s Computerworld, Informática; **COLOMBIA**'s Computerworld Colombia; **CZECH REPUBLIC**'s Computerworld, Elektronika, PC World; **DENMARK**'s CAD/CAM World, Communications World, Computerworld Danmark, Lotus World, Macintosh Produktkatalog, Macworld Danmark, PC World Danmark, PC World Produktguide, Windows World; **ECUADOR**'s PC World; **EGYPT**'s Computer World (CW) Middle East, PC World Middle East; **FINLAND**'s MikroPC, Tietoverkko, Tietoviikko; **FRANCE**'s Distributique, Golden Mac, InfoPC, Languages & Systems, Le Guide du Monde Informatique, Le Monde Informatique, Télécoms & Reseaux; **GERMANY**'s Computerwoche, Computerwoche Extra, Computerwoche Focus, Computerwoche Karriere, Information Management, Macwelt, Netzwelt, PC Welt, PC Woche, Publish, Unit; **HUNGARY**'s Alaplap, Computerworld SZT, PC World; **INDIA**'s Computers & Communications; **ISRAEL**'s Computerworld Israel, PC World Israel; **ITALY**'s Computerworld Italia, Lotus Magazine, Macworld Italia, Networking Italia, PC World Italia; **JAPAN**'s Computerworld Japan, Macworld Japan, SunWorld Japan, Windows World; **KENYA**'s East African Computer News; **KOREA**'s Computerworld Korea, Macworld Korea, PC World Korea; **MEXICO**'s Compu Edicion, Compu Manufactura, Computacion/Punto de Venta, Computerworld Mexico, MacWorld, Mundo Unix, PC World, Windows; **THE NETHERLANDS**' Computer! Totaal, LAN Magazine, MacWorld; **NEW ZEALAND**'s Computer Listings, Computerworld New Zealand, New Zealand PC World; **NIGERIA**'s PC World Africa; **NORWAY**'s Computerworld Norge, C/World, IDG Direct Response, Lotusworld Norge, Macworld Norge, Networld, PC World Ekspress, PC World Norge, PC World's Product Guide, Publish World, Student Data, Unix World, Windowsworld; **PANAMA**'s PC World; **PEOPLE'S REPUBLIC OF CHINA**'s China Computerworld, China Network World, Electronics International, PC World China; **IDG HIGH TECH BEIJING**'s New Product World; **IDG SHENZHEN**'s Computer News Digest; **PERU**'s Computerworld Peru, PC World; **PHILIPPINES**' Computerworld, PC World; **POLAND**'s Computerworld Poland, PC World/Komputer; **PORTUGAL**'s Cerebro/PC World, Correio Informatico/Computerworld, Macin; **ROMANIA**'s PC World; **RUSSIA's** Computerworld-Moscow, Mir-PC, Sety; **SLOVENIA**'s Monitor Magazine; **SOUTH AFRICA**'s Computing S.A.; **SPAIN**'s Amiga World, Computerworld España, Comunicaciones World, Macworld España, NeXTworld, PC World España, Publish, Sunworld; **SWEDEN**'s Attack, ComputerSweden, Corporate Computing, Dataingenjoren, Lokala Natverk/LAN, Lotus World, MAC&PC, Macworld, Maxi Data, Mikrodatorn, PC World, Publishing & Design (CAP), Windows World; **SWITZERLAND**'s Computerworld Schweiz, Macworld Schweiz, PC & Workstation; **TAIWAN**'s Computerworld Taiwan, Global Computer Express, PC World Taiwan; **THAILAND**'s Thai Computerworld; **TURKEY**'s Computerworld Monitor, Macworld Turkiye, PC World Turkiye; **UKRAINE**'s Computer World; **UNITED KINGDOM**'s Lotus Magazine, Macworld, Sunworld; **UNITED STATES**' AmigaWorld, Cable in the Classroom, CD Review, CID, Computerworld, Desktop Video World, DOS Resource Guide, Electronic News, Federal Computer Week, Federal Integrator, GamePro, IDG Books, Infoworld, Infoworld Direct, Laser Event, Macworld, Multimedia World, Network World, NeXTworld, PC Games, PC Letter, PC World, Publish, Sumeria, SunWorld, SWATPro, Video Event; **VENEZUELA**'s Computerworld Venezuela, MicroComputerworld Venezuela; **VIETNAM**'s PC World Vietnam.

Index

Reader Service Number		Page Number
–	Dell	156-157
–	Dell	236-267
–	Dell	261
–	Dell	C5-C8
83	Digital Equipment	109A-B
82	Digital Equipment Corporation	183
84	DTK Inc.	213
–	Epson	18-19
107	Everex	139
92	EXABYTE/Eagle Division	250A
101	Fabrik Communications	250D
100	Fusion Software	272
–	Gateway 2000	57-65
102	HANSOL MULTITECH, INC.	13
–	Hewlett Packard-Colorado	141
–	Hewlett-Packard JetDirect	197
–	Hewlett-Packard Laserjet	66
–	Hewlett-Packard PC	42-43
109	HITACHI	35-37
106	Intergraph Software Systems	20
104	International Jensen	263
170	KDS	195
136	KeyStone Learning Systems	286
128	Kingston Technology	247
127	Kyocera	109
–	LA TRADE	287
134	Lexmark	94-95
96	LG Electronics, U.S.A., Inc.	159
–	Logitech	229
144	MAG InnoVision	4-5
142	Mannesman Tally	146
143	Matrox Graphics, Inc.	128
147	MegaHaus Hard Drives	300
138	MEGAHERTZ	105A-B
–	Micrografx	85
153	MicroHelp	105
149	Micron Electronics	8-11
149	Micron Electronics	121-127
–	Microsoft	C2-P1
155	Midwest Computer Works	292-293
154	MultiVideo Labs, Inc.	34
203	NEC Laptops	22-23
176	NEC PGG	32
163	NEC Printers	224-225
126	NETCOM	87
158	NewSoft	38
180	Nokia	27
–	NOVELL	218A-D
164	Now Software	245
–	Okidata	233
167	Ositech Communications, Inc.	265
168	Patton & Patton	250B
195	PC AMERICA	112
–	PC Connection	252-253
172	PC World Online	318
161	PC Zone	294-295
129	PCs Compleat	290-291
223	Peachtree Software	234
212	PKWARE	137
175	Plextor	241
191	Practical Periphals	24
–	Quantex	89-93
189	Quarterdeck Office Systems	75
194	Quarterdeck Office Systems	77
185	Quarterdeck Office Systems	79
209	Seagate	179
199	SIMPLE TECHNOLOGY	205
206	SMILE Int'l	319
253	SPSS, Inc.	187
210	STB Systems	210
196	Sunshine Computers	301
214	Swan Technology	242-243
124	Tektronix	189
242	Texas Instruments	107
229	Tiger Software	285
–	Toray Marketing & Sales	271
233	TOSHIBA	227
–	Toyota Motor Sales	26
239	TRAVELING SW	256
240	Twinhead	147
–	U.S. Robotics	133
–	U.S. Robotics	151
250	Umax	191
231	USA Flex	302
224	ViewSonic	28-29
–	VISIO	174-175
187	Visioneer	40-41
254	WinBook	16-17
–	Xerox	208
257	Xerox Corporation	181

Advertiser Index by Product Category

Get more information—circle the appropriate number on the reader service card.

HARDWARE

Boards/Cards/Chips

24	Aura Systems, Inc.	214
128	Kingston Technology	247
143	Matrox Graphics, Inc.	128
199	SIMPLE TECHNOLOGY	205
210	STB Systems	210

Communications/Fax-Modems

138	MEGAHERTZ	105A-B
167	Ositech Communications, Inc.	265
–	U.S. Robotics	133
–	U.S. Robotics	151

Computers

–	Acer Direct	222
9	ALR	15
27	AMS Inc.	235
–	Austin/IPC Technologies	158A-D
–	Compaq Direct Plus	71
66	Cyrix Systems Direct	143-145
–	Dell	30-31
–	Dell	82-83
–	Dell	110-111
–	Dell	135
–	Dell	152-153
–	Dell	156-157
–	Dell	236-267
–	Dell	261
–	Dell	C5-C8
84	DTK Inc.	213
–	Gateway 2000	57-65
–	Hewlett-Packard PC	42-43
149	Micron Electronics	121-127
–	Quantex	89-93
240	Twinhead	147

Desktop Publishing

214	Swan Technology	242-243

File Servers

149	Micron Electronics	121-127

Laptop/Notebook

7	3M Visual Systems	81
–	Acer Direct	52-54
27	AMS Inc.	235
–	Austin/IPC Technologies	158A-D
–	Compaq Direct Plus	69
107	Everex	139
–	Gateway 2000	57-65
109	HITACHI	35-37
149	Micron Electronics	8-11
203	NEC Laptops	22-23
214	Swan Technology	242-243
242	Texas Instruments	107
233	TOSHIBA	227
240	Twinhead	147
254	WinBook	16-17

Monitors/Displays

–	ADI	165
74	CTX Int'l	173
102	HANSOL MULTITECH, INC.	13
170	KDS	195
96	LG Electronics, U.S.A., Inc.	159
144	MAG InnoVision	4-5
154	MultiVideo Labs, Inc.	34
180	Nokia	27
206	SMILE Int'l	319
224	ViewSonic	28-29

Multimedia

7	3M Visual Systems	81
–	Casio, Inc.	259
56	Creative Labs	161
59	Creative Labs	163
104	International Jensen	263
175	Plextor	241
214	Swan Technology	242-243
–	Toray Marketing & Sales	271
–	Toyota Motor Sales	26

Other

–	Casio, Inc.	259

Peripheral/Sharing Devices

–	Adaptec	218
239	TRAVELING SW	256
92	EXABYTE/Eagle Division	250A
–	Hewlett Packard-Colorado	141
147	MegaHaus Hard Drives	300
209	Seagate	179

Power/Protection

45	APC	72-73

Printers/Plotters

–	Canon Computer Systems	2-3
–	Canon U.S.A-Graphics Systems	103
–	Epson	18-19
–	Hewlett-Packard JetDirect	197
–	Hewlett-Packard Laserjet	66
127	Kyocera	109
134	Lexmark	94-95
142	Mannesman Tally	146
163	NEC Printers	224-225
–	Okidata	233
124	Tektronix	189
257	Xerox Corporation	181

Scanners/Digitizers

–	Logitech	229
250	Umax	191
187	Visioneer	40-41

Storage/Backup Devices

–	Toray Marketing & Sales	271

Systems

196	Sunshine Computers	301

SOFTWARE

Accounting/Financial

77	DacEasy	257
223	Peachtree Software	234

CAD/CAM

106	Intergraph Software Systems	20

Communications/Fax/Modems

79	DataStorm	249
126	NETCOM	87
191	Practical Periphals	24

Database Management

–	Claris	230

Education

48	Corel Corporation	309
63	Corel Corporation	313
76	Corel Corporation	317

E-Mail

80	Decisive Technology	250C
101	Fabrik Communications	250D

Entertainment

48	Corel Corporation	309
63	Corel Corporation	313
76	Corel Corporation	317
100	Fusion Software	272

Graphics

32	Adobe Systems	216
12	Adobe Systems, Inc.	168-169
49	Corel Corporation	315
78	Corel Corporation	203
–	Micrografx	85
–	VISIO	174-175

Management

195	PC AMERICA	112

Operating Systems

82	Digital Equipment Corporation	183

Optical Character Recognition

91	Caere Corp.	155
158	NewSoft	38

Presentation Graphics

176	NEC PGG	32

Project Management

168	Patton & Patton	250B

Schedule Software

164	Now Software	245

Software Suites

70	Corel Corporation	201
–	Microsoft	C2-P1

Spreadsheets/Templates/Forms

40	Caere Corp.	129

Statistics

80	Decisive Technology	250C
253	SPSS, Inc.	187

Utilities

14	AEC	255
153	MicroHelp	105
158	NewSoft	38
212	PKWARE	137
189	Quarterdeck Office Systems	75
194	Quarterdeck Office Systems	77
185	Quarterdeck Office Systems	79

Video

86	Connectix	267
29	Connectix	269
136	KeyStone Learning Systems	286

Index

Reader Service Number — Page Number

Windows

14 AEC 255
77 DacEasy 257
79 DataStorm 249
100 Fusion Software 272
106 Intergraph Software Systems ... 20
153 MicroHelp 105
223 Peachtree Software 234
212 PKWARE 137
191 Practical Periphals 24
229 Tiger Software 285

Word Processing/Aids

70 Corel Corporation 201

MISCELLANEOUS

Computer Accessories

4 3M Data Storage 206-207

Mail Order

8 Arlington Computer Products 288-289
68 Computer Discount Warehouse 296-299
– LA TRADE 287
147 MegaHaus Hard Drives 300
155 Midwest Computer Works 292-293
– PC Connection 252-253
161 PC Zone 294-295
129 PCs Compleat 290-291
196 Sunshine Computers 301
229 Tiger Software 285
231 USA Flex 302

Online Services

33 CompuServe 251
83 Digital Equipment 109A-B
101 Fabrik Communications 250D
172 PC World Online 318

Optical Character Recognition

– Xerox 208

Supplies

15 Avery 220

Training

136 KeyStone Learning Systems ... 286

Products Featured in Editorial

Get more information—circle the appropriate number on the reader service card.

Accessory

699 Telemaster 2000, Rolodex 312

Add-On Board

608 ATI Video Xpression, ATI 215
606 Diamond Stealth64 Video 2201TV, Diamond Multimedia 215
603 Diamond Stealth64 Video 2201XL, Diamond Multimedia 215
716 Diamond Stealth64 Video 3200, Diamond Multimedia 108
696 Graphics Blaster MA302, MA202; Creative Labs 70
609 Hercules Stingray 64/Video, Hercules 215
604 Hercules Terminator 64/Video, Hercules 215
605 Hercules Terminator Professional, Hercules 215
601 Matrox MGA Millennium, Matrox 215
610 Number Nine 9FX Motion771, Number Nine 215
693 QuickVideo Capture Board, Alaris 68
714 Sound Blaster 16, Creative Labs 108
602 STB Powergraph 64 Video, STB 215
607 STB Velocity 64 Video, STB ... 215

Business Software

689 Managing Across Difference, Harvard Business School Publishing 84
680 Wall Street Analyst, Omega Research 78

CAD/CAM Software

710 AutoCAD R13, Autodesk 108

CD-Recordable

728 HP Surestore CD-Writer 4020i, Hewlett-Packard 108

CD-ROM Drive

697 8Plex, Plextor 74
726 NEC MultiSpin 6X, NEC Technologies 108

Communication

734 Procomm Plus 3.0 for Windows, Datastorm Technologies 108
676 Whozz Calling 4, Zeus PhonStuff 88
674 Wildfire Version 1.3, Wildfire Communications 86
715 WinFax Pro 7.0, Symantec Corp./Delrina 108

Conferencing Software

712 Collabra Share 2.2, Netscape Communications 108

Contact Manager

729 Act 2.0 for Windows, Symantec 108

CPU

720 Pentium Processor 166, Intel 108
720 Pentium Pro Processor, Intel 108

Data Recovery

672 Ontrack Data Recovery 320

Database Utility

724 Access for Windows 95, Microsoft 108, 134
829 Alpha Five, Alpha Software 138
825 Approach 96 Edition for Windows 95, Lotus Development 138
826 FileMaker Pro 3.0, Claris 140
827 Paradox 7, Borland International 142
828 Salsa for the Desktop, Wall Data 134

Desktop Computer

761 Acma zPower 100, Acma Computers 185
802 AST Advantage 626, AST Computer 198
760 Austin PowerPlus 100, Austin Direct 185
776 Compaq Deskpro 5133, Compaq Computer 177
772 Compaq Deskpro XL 5133, Compaq Computer 177
806 Compaq Presario 9234, Compaq Computer 316
805 Compaq Presario 9240, Compaq Computer 316
755 Compaq ProLinea 575e, Compaq Computer 185
778 Compaq ProLinea 5120, Compaq Computer 177
762 CompuTrend Premio 5x86-100, CompuTrend Systems 185
777 Cyrix 6x86-P166+ PC, Cyrix ... 177
743 Dell Dimension P100t, Dell Computer 185, 316
763 Dell Dimension XPS P133c, Dell Computer 177
835 Dell Dimension XPS P200s, Dell Computer 47
750 Dell OptiPlex GL+575, Dell Computer 185
764 Dell OptiPlex GXMT 5133, Dell Computer 177
754 Diamond OfficeMate P5120, Diamond Technologies 185
779 Digital Celebris GL 5166ST, Digital Equipment 177
758 DTK Quin 54M/P100, DTK Computer 185
803 First Computer FCS P5-150, First Computer Systems 198
746 Gateway 2000 P5-120, Gateway 2000 185
773 Gateway 2000 P5-133, Gateway 2000 177
774 Gateway 2000 P5-133XL, Gateway 2000 177
836 Gateway 200 P5-200, Gateway 2000 47
717 Gateway 2000 Family PC line, Gateway 2000 108
717 Gateway 2000 Professional line, Gateway 2000 108
759 HiQ Saturn Station, HiQuality Computer Systems 185
807 HP Pavilion 7130P, Hewlett-Packard 316
766 HP Vectra 500 Model 515MCx 5/166, Hewlett-Packard 177
769 HP Vectra VL Series 4 5/166 MT, Hewlett-Packard 177
837 HP Vectra VL4 5/200 MT, Hewlett-Packard 47
768 Maximus Magna Media P-166, Maximus Computers 177, 185
752 Micro Express MicroFlex-686/P120+, Micro Express 185
749 Micro Express MicroFlex-PCI/5133, Micro Express 185
804 Micron Home MPC Pro, Micron Electronics 316
765 Micron P133 Millennia, Micron Electronics 177
767 Micron P166 Millennia Plus, Micron Electronics 177
838 Micron P200 Millennia, Micron Electronics 47
804 MidWest Micro P5-133 Home PC, MidWest Micro 198
770 NEC PowerMate P133, NEC Technologies 177
805 NEC Ready 9619, NEC Technologies 198
748 Netis N5133DPS, Netis Technology 185
806 NMC Expert 166, National Microcomputers 199
781 PerComp P166 Professional, PerComp Microsystems 177
757 Polywell Poly 4120P8, Polywell Computer 185
780 Polywell Poly 5166P8, Polywell Computer 177
745 Quantex QP5/100 M-3, Quantex Microsystems 185
775 Quantex QP5/133 SM-2, Quantex Microsystems 177
839 Quantex QP5/200 SM-2, Quantex Microsystems 47
747 Robotech Cobra XLT P-133, Robotech Computer 185
807 Swan PowerHouse P-150, Swan Technologies 200
782 Sys Technology Performance C166+, Sys Technology 177
808 Sys Value Edition C166V+, Sys Technology 202
751 Tempest Pentium Giga Media P5-100, Tempest Micro 185
840 Unisys Aquanta DM, Unisys 47
822 USA Flex Family Special P-133, USA Flex 202
744 Vektron Multimedia P-100, Vektron 185
771 Xi Computer P166MTower SP, Xi Computer 177
756 Xi P133MTower SP, Xi Computer 185
809 Xi Pro 200 Mtower SP, Xi Computer 202

Desktop Publishing

707 Adobe Pagemaker, Adobe Systems 108

Disk Drive

698 Power Storage Hard Drive Upgrade Kit, Adaptec, Inc. 74
738 Western Digtal Caviar AC31600, Western Digital 108

Display

623 EIZO Nanao Flexscan F2-17, Nanao USA 211
621 Iiyama VisionMaster Pro 17, Iiyama 211
628 MAG InnoVision MXP17F, MAG InnoVision 211
627 Mitsubishi Diamond Pro 17TX, Mitsubishi Electronics America 211
726 NEC MultiSync XV 15+, NEC Technologies 108
726 NEC MultiSync XV 17+, NEC Technologies 108, 211
630 Nokia Valuegraph 447L, Nokia Display Products 211
626 Princeton Graphic Ultra 17+, Princeton Graphics Systems ... 211
622 Samsung SyncMaster 17GLi, Samsung 211
629 ViewSonic 17PS, ViewSonic ... 211
624 ViewSonic Optiquest V775, ViewSonic 211

E-Mail

723 Lotus cc:Mail for Windows, Lotus Development 108

Educational

724 Microsoft Encarta, Microsoft ... 108

Index

Reader Service Number — Page Number

Entertainment/Game

704 Gearheads, Philips Media Games ... 314
724 Microsoft Cinemania, Microsoft ... 108
705 Smart Games Challenge #1, RandomSoft ... 314
700 Spycraft: The Great Game, Activision ... 312

Fax-Modem

615 Cardinal Technologies Inc. MVP288XV, Cardinal Technologies ... 217
618 Hayes Optima 288 V.34+FAX for PCMCIA with Ezjack, Hayes Microcomputer Products ... 217
718 Hayes Optima 288 V.34+FAX with EZJack, Hayes Microcomputer Products ... 108
675 Megahertz AllPoints Wireless Modem, U.S. Robotics ... 88
619 Megahertz XJ3228, Megahertz ... 217
611 Microcom DeskPorte 28.8P, Microcom ... 217
614 Microcom DeskPorte Fast V.34, Microcom ... 217
617 Microcom Travelcard 28.8P, Microcom ... 217
612 Motorola ISG Lifestyle 28.8, Motorola ... 217
620 MultiTech MultiModem LT, MultiTech ... 217
735 Sportster 28.8 Faxmodem, U.S. Robotics ... 108
613 Sportster V.34 Faxmodem, U.S. Robotics ... 217
616 Zoom Telephonics V.34C Model 520, Zoom Telephonics ... 217

Financial

– Intuit QuickBooks 4.0, Intuit ... 108
Quicken 5 for Windows 95, Intuit ... 108
– TurboTax, Intuit ... 108

Forms

715 FormFlow 2.0, Symantec Corp./Delrina ... 108

Graphics

710 Autodesk 3D Studio 4.0, Autodesk ... 108
713 CorelDraw 6.0, Corel ... 108
724 Microsoft PowerPoint, Microsoft ... 108

Groupware

707 Adobe Acrobat 2.1, Adobe Systems ... 108
723 Lotus Notes release 4, Lotus Development ... 108

Image Editor

707 Adobe Photoshop, Adobe Systems ... 108

Input Device

722 Logitech MouseMan, Logitech ... 108
724 Microsoft Natural Keyboard, Microsoft ... 108

Internet Tool

682 Internet Assistants for Microsoft Office Microsoft ... 80
724 Microsoft Internet Assistant, Microsoft ... 108
677 WIRL, VREAM ... 264

Kid's Software

706 Disney Animated Storybook, Toy Story Disney Interactive ... 314
701 Logical Journey of the Zoombinis, Broderbund Software ... 314
725 Where in the World is Carmen Sandiego?, Broderbund Software, Inc. ... 108

Mail Order

731 PC Connection ... 108

Miscellaneous Hardware

720 Intel ProShare Video Conferencing System 200, Intel ... 108

Multimedia Upgrade Kit

714 Creative Labs Discovery Multimedia Upgrade Kit, Creative Labs ... 108

Network Server

719 HP NetServer line, Hewlett-Packard ... 108
– IBM PC Server line, IBM ... 108

Notebook Computer

798 AST Ascentia 950N, AST Computer ... 193
788 AST Ascentia J30, AST Computer ... 193
810 Canon InnovaBook 300P, Canon Computer Systems ... 202
811 CTX ExBook 655 CDT, CTX International ... 202
795 Dell Latitude Xpi P75D, Dell Computer ... 193
786 Dell Latitude Xpi P120ST, Dell Computer ... 193
783 Gateway 2000 Solo S5-120XL, Gateway 2000 ... 193
– IBM ThinkPad 701C, 755CD; IBM ... 108
– IBM ThinkPad 760C, IBM ... 193
812 Magitronic 550 Series, Magitronic Technology ... 202
823 Magitronic 600 Series, Magitronic Technology ... 202
796 Mega Image MegaBook 880, Mega Image ... 193
801 MPC TouchNote 1000, MPC Technologies ... 193
791 NEC Versa 4080H, NEC Technologies ... 193
814 Polywell Poly 5133 NB8, Polywell Computer ... 202
797 Sharp PC 3020, Sharp Electronics ... 193
815 Texas Instruments Extensa 560CD, Texas Instruments ... 204
790 Texas Instruments TravelMate 5100, Texas Instruments ... 193
ThinkPad 560, IBM ... 67
789 Toshiba Portégé 610CT, Toshiba America Information Systems ... 193
792 Toshiba Satellite 100CS, Toshiba America Information Systems ... 193
785 Toshiba Satellite Pro 400CDT, Toshiba America Information Systems ... 193
793 Toshiba Satellite T2130CS, Toshiba America Information Systems ... 193
794 Toshiba Satellite T2130CT, Toshiba America Information Systems ... 193
784 Toshiba Tecra 700CT, Toshiba America Information Systems ... 193
800 WinBook XP5 P75, WinBook ... 193
787 WinBook XP5 P120, WinBook ... 193
799 ZDS Z-Note MX, Zenith Data Systems ... 193

Online Service

708 America Online ... 108
686 CompuServe ... 119
727 Netcom, Netcom On-Line Communications Services ... 108
687 Prodigy ... 119
688 Wow ... 119

Operating Environment

724 Microsoft Windows 95, Microsoft ... 108
724 Microsoft Windows NT, Microsoft ... 108
730 Novell NetWare 4.1, Novell ... 108

Optical Character Recognition Software

711 Caere OmniPage Pro 6.0, Caere ... 108

Optical Drive

732 Pinnacle Micro Apex 4.6GB Optical Drive, Pinnacle Micro ... 108

Personal Digital Assistant

709 Apple Newton, Apple Computer ... 108
726 HP OmniGo 100 Organizer Plus, Hewlett-Packard ... 108

Personal Information Manager

723 Lotus Organizer 2.1, Lotus Development ... 108

Printer

694 Canon MultiPass C2500, 800; Canon Computer ... 68
– Epson Stylus Pro, Epson Pro XL; Epson America ... 108
721 HP Color LaserJet 5, Hewlett-Packard ... 108
722 HP DeskJet 855C, Hewlett-Packard ... 108
649 HP DeskJet 1600CM, Hewlett-Packard ... 150
648 HP LaserJet 4MV, Hewlett-Packard ... 150
723 HP LaserJet 5/5M, Hewlett-Packard ... 108
724 HP LaserJet 5M Plus, Hewlett-Packard ... 108
643 HP LaserJet 5M, Hewlett-Packard ... 150
725 HP OfficeJet Model 350, Hewlett-Packard ... 108
651 Lexmark Optra C, Lexmark International ... 150
642 Lexmark Optra Lx+, Lexmark International ... 150
644 Lexmark Optra R+, Lexmark International ... 150
645 Okidata OL1200/PS, Okidata ... 150
737 Tektronix Phaser 340, Tektronix ... 108
650 Tektronix Phaser 550, Tektronix ... 150
646 TI microLaser PowerPro/12, Texas Instruments ... 150
647 TI microLaser Pro/8, Texas Instruments ... 150

Project Management

724 Microsoft Project for Windows 95, Microsoft ... 108

Programming Language

724 Microsoft Visual Basic v4.0, Microsoft ... 108

Reference

703 Kaplan's Career Counselor, Kaplan Interactive ... 314
702 LandDesigner 3D, Sierra Online ... 314

Remote Control/Access

729 Norton pcAnywhere-32, Symantec ... 108

Removable Storage

721 Iomega Zip drive, Iomega ... 108

Scanner

727 HP ScanJet 4c, Hewlett-Packard ... 108

Software Suite

724 Microsoft Office 95, Microsoft ... 108

Spreadsheet

724 Microsoft Excel 5.0, Microsoft ... 108

Tape Backup

719 HP Colorado Backup, Hewlett-Packard ... 108
720 HP Colorado T1000e, Hewlett-Packard ... 108
695 Tape1600, Tape800; Teac America ... 70

Utility

683 CD-ROM Express, PC-Kwik ... 80
684 d-Time95, Ballard Synergy ... 80
673 DocuMagix HotPage, DocuMagix, Inc ... 86
692 Help Browser 2.0, Cascadilla Press ... 240
681 MacOpener 2.0, DataViz ... 78
729 Norton Navigator for Windows 95, Symantec ... 108
729 Norton Utilities for Windows 95, Symantec ... 108
733 PKZIP version 2, PKWare, Inc. ... 108
691 QuickView Plus, Inso ... 240

Web Browser

678 Internet Explorer 3, Microsoft ... 76
679 Navigator 3.0, Netscape Communications ... 76
728 Navigator 2.0, Netscape Communications ... 108

Web Site

– Travelocity, Sabre Interactive ... 84
– Yahoo, Yahoo ... 108

Wireless Communication

736 SkyCard PCMCIA Card, SkyTel ... 108

Word Processor

724 Microsoft Word 6.0, Microsoft ... 108

From the world leader in Windows® graphics software

CD-ROM Format

THE BEST IN 32-BIT GRAPHICS POWER FOR EVERYONE!

Corel Print House™ — the best-selling Windows® 95 software application! (PC DATA, Jan. '96)

Corel Print House™ — Requires Windows® 95

The Easy All-In-One Graphics Powerhouse!

Incredible Value!

- 5,000 stunning clipart images
- 1,000 catchy phrases
- 1,000 fantastic photos
- 1,000+ professionally designed and easy-to-use samples
- 100+ top-quality fonts

Easy to Use!

- Create great-looking projects in a few easy steps
- Intuitive interface
- Drag-and-drop clipart and special effects

CorelDRAW® 6

The Best in 32-Bit Graphics!

Microsoft® Windows 95

Powerful!

- Designed exclusively for Microsoft® Windows® 95
- State-of-the-art 32-bit graphics engine
- Power, precision and 32-bit speed
- Fully customizable user interface
- Multiple Document Interface (MDI)

Incredible Value!

- Fully featured applications for illustration, photo-editing and bitmap creation, 3D rendering, animation and multimedia presentations
- OLE 2.0 support, drag and drop between applications
- Industry-leading drawing, editing and text handling capabilities

Corel® Graphics Pack — Requires Windows® 95

The 32-Bit Wizard-Driven Total Graphics Solution!

Easy to Use!

- All-in-one graphics solution!
- Ideal for graphics, presentations, photo touch-ups, 3D graphics, charts and diagrams, space planning, family trees, stationery, calendars, home page creation, greeting cards and much more!
- Wizard-style user interface
- Step-by-step help file
- Choose from over 50 tasks

Powerful!

- State-of-the-art 32-bit graphics engine
- 32-bit power and precision

Circle 48 on reader service card

Enter the Corel $3,000,000 World Design Contest! (September '95 to July '96) To receive a faxed copy of the contest rules and an entry form, please call: 1-613-728-0826, ext. 3080 Document # 1125 To leave a message: 1-613-728-0826, ext. 81609. To send a fax: 1-613-728-2891.

Corel, CorelDRAW and Corel Print House are either trademarks or registered trademarks of Corel Corporation in Canada, the United States and/or other countries

Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

EGGHEAD®
All you need to know.
1-800-EGGHEAD

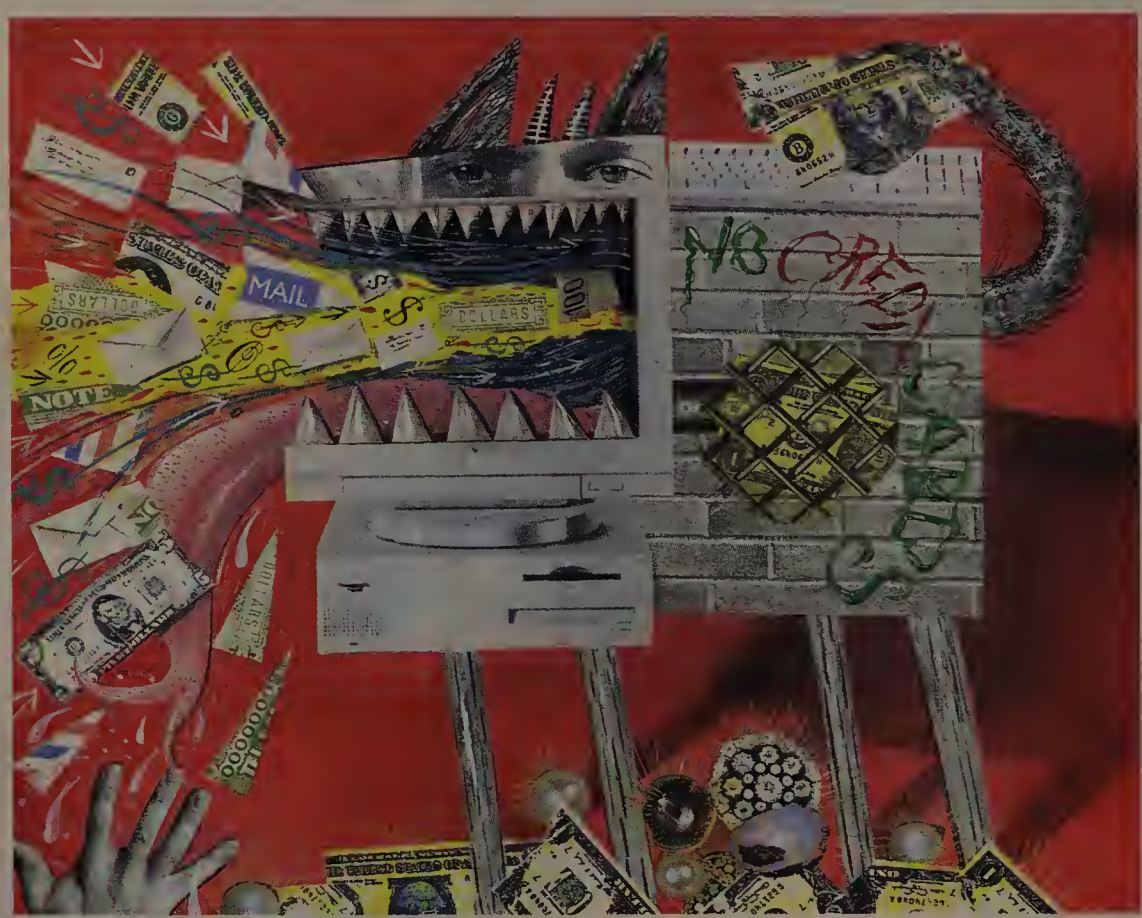
CorelDRAW™ 5 to CorelDRAW™ 6 upgrade $239.38* CUE
CorelDRAW™ 6: $459.78 CUE
Corel Print House™ $19.93* CUE
Special price while quantities last.
Corel® Graphics Pack $99.93* CUE
*US$ plus applicable taxes and shipping.

KUR-0239-US

http://www.corel.com
Call now for faxed literature!
1-613-728-0826 ext. 3080

@HOME

EDITED BY CHRISTINA WOOD



JANET WOOLEY

Consumer Watch

The ABCs of Mail-Order Shopping

BY ROBERTA FURGER

Jeffrey Ratliff-Crain was looking for a new PC and spotted a great deal in an advertisement from a mail-order firm called PC Distributor. The full-page ad featured products from Compaq, Hewlett-Packard, IBM, and others. The prices were better than any local store was offering, so Ratliff-Crain called the company, placed his order, and sent them a check for $3300. His check was cashed, but Ratliff-Crain—like other customers—never received his order. PC Distributor disconnected its phone lines and closed its doors, leaving dozens of unfulfilled orders in its wake.

"It was an expensive lesson," Ratliff-Crain says. "But never again will I send a check to a mail-order company."

"Once the check is cleared, it's too late," says Tom Taylor, the Postal Service's San Francisco Division postal inspector. "By then, the horse is out of the barn. Even if we catch the owners, there's not a lot we can do to get anyone's money back."

Fly-by-night mail-order outfits are the exception, not the rule. But, says Taylor, as computers become more common, they will attract more scam operators. "Computers are becoming more like TVs; everyone has one; everyone wants more. That makes them an effective medium for the theft of the nineties."

Does that mean you should just stop buying PC hardware and software by mail order? No. What it does call for, though, is extra caution before making a purchase.

DANGER SIGNS

Although there's no sure way of telling a legitimate company from a bogus one, be on the lookout for clues—many of which were present in PC Distributor's full-page ad.

No credit cards accepted. According to Taylor, companies must be in business at least two years and have "A-1" credit to open a merchant account with a major credit card company. They also must be secure enough financially to afford the bank transaction fees. While a company that accepts only cash is not *necessarily* illegitimate, this should be a warning flag. If you check out the company (see "Mail-Order Do's and Don'ts") and it appears to be on the up-and-up, ask your credit card company if you can write a check from your card account and still receive the protection that you would paying with your card.

Outrageously low prices. Many consumers we spoke with noted that PC Distributor's prices seemed too good to be true. A 133-MHz IBM Aptiva, for example, listed for only $1399. That's less than the price offered by IBM's retail outlet, which sells *refurbished* computers. "Whenever a company offers to sell you a wonderful system at half the normal price, that should be a big clue," says Taylor. "It's been said before, but if the offer seems to good to be true, it probably is," he adds.

Bizarre offers. PC Distributor sold an odd assortment of new and refurbished goods. The company even offered to throw in an HP DeskJet 320 with the purchase of every notebook or desktop computer. Although legitimate liquidators may sell an eclectic mix of products, the free giveaway is a classic ploy to lure the unsuspecting.

AFTER THE CRIME

Hindsight, as they say, has 20-20 vision. Here's what you can do if you find yourself the unlucky victim of a mail-order scam.

Step 1: Compile all your documentation. Put together a file that includes a copy of the advertisement, the names of anyone you spoke with at the company, any correspondence you received about your order, and a copy of your canceled check.

Step 2: Contact the authorities. Start with the U.S. Postal Inspector, the office primarily responsible for investigating crimes conducted through the U.S. mail. It has regional offices across the United States; you'll need to contact the one closest to the city the business is located in (rather than the one closest to *you*). Also send a copy of your complaint to your state attorney general's consumer protection unit. If enough residents are victimized, prosecutors may follow up on the complaints. Finally, make a copy for the local police department. Because of limited resources, local authorities often can't investigate, but for the cost of a stamp, it can't hurt.

According to Taylor, the Postal Inspector will open an investigation if it gets enough complaints. (It's against the office's policy to say whether it is investigating anyone, however.) The more documentation investigators have on a firm and its principals (canceled checks with account numbers, first and last names), the greater the chance of presenting a solid case to the U.S. Attorney. Even then, "it's a crap shoot" whether federal prosecutors will act, says Taylor. They consider the seriousness of the alleged crime and how expensive the case will be to pursue. Mail-order fraud cases can be very costly because victims are often located all over the country. So even if the Postal Inspector puts together a good case, the U.S. Attorney may not prosecute.

Step 3: File your own lawsuit. For losses under $5000, you can go to small claims court. You'll likely win, but collecting the judgment is another matter, according to Paul Bergman, a law professor at the University of California, Los Angeles and author of *Represent Yourself in Court* (Nolo Press, 1993, 510/549-1976). In a suit against a Florida-based firm, he explains, "Let's say a California resident wins in small claims court. They'd have to hire someone in Florida to collect. That will cost about half of what they recover." Only consumers who lost several thousand dollars may convince someone to try collecting.

The bottom line: Sending cash to a mail-order firm is risky, and your chances of recouping the money if the company goes south are slim. The best advice? Use common sense. Trust your instincts. Pay with a credit card. And make sure you know who you're buying from.

As always, you can contact Consumer Watch *with questions and problems. See page 14 for contact information.*

MAIL ORDER DO'S AND DON'TS

➤ **Get recommendations before buying.** Post a query on CompuServe (go support/computer systems or go components/pc hardware forum); to America Online's User Group Forum (go ugf) or Mail Order Forum (go pc hardware, then computers/mail order pc vendors discussion); or on the Internet (comp.sys.ibm.pc.hardware.systems).

➤ **Check with the Better Business Bureau.** If a company is unfamiliar, call the BBB in its city to see what's on file. But remember, a BBB query is most helpful for well-established businesses; new firms may have no track records. Don't assume no news is good news.

➤ **Verify that the equipment is new.** This is particularly important if you're purchasing upgrade equipment such as hard drives.

➤ **Request written verification of your order.** This will save you the hassle of shipping back an incorrect product and provides you with documentation should the company go out of business or bungle the sale.

➤ **Don't send cash.** Or a personal check, money order, or a cashier's check. You have no recourse if the company goes out of business without shipping your order.

UPPER RIGHT: JAMES YANG; RIGHT: BILL RUSSELL

Feedback

When Companies Die

We received a letter from Paul Riseman of Springfield, Illinois, complaining about his Zeos Pantera Pentium, which he purchased after reading good reviews in *PC World*. Zeos technical support was unable to get his PC running, despite many attempts. Ordinarily, we would forward Riseman's letter to Zeos. But on February 26, 1996, Micron Electronics, owners of Zeos, closed its subsidiary's doors for good. We forwarded the letter to Micron to find out not only what the company would do for Riseman but how it is planning to handle all Zeos customers. According to Ken Birch, vice president of strategic relations at Micron, Zeos customers will be treated just as if they were customers of Micron. Micron retained much of the Zeos support staff, and all Zeos phone support numbers are still working. You can also call Micron tech support lines for answers to general questions. Birch points out that there are more resources available to Zeos customers now than before: Overall, more support people are available, and you can also get help through the Internet (http://www. mei.micron.com). Micron is working with Riseman to resolve his computer problems.

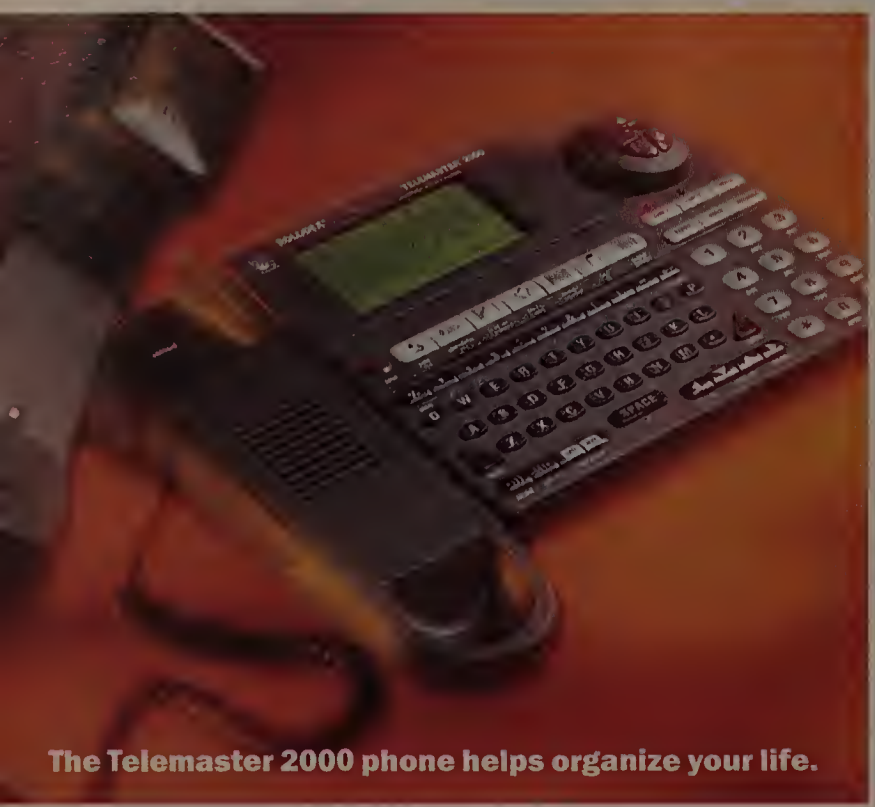
TAKE NOTE: **89 percent of the respondents to a consumer survey agree students must learn computer skills to succeed in today's world.** Source: NSI/Techtel Consumer Technology Attitude Survey of 1000 U.S. households.

Unexpected Resolution

As the official complaint department at *PC World, Feedback* hears its share of horror stories about customer service gone awry. So it was pleasant to hear from Walter Lettaw of Sandy Hook, Connecticut. In January 1995, he bought a factory-refurbished Canon BJC-600 printer with a 90-day warranty. One year later, he began having problems with the printer and learned that it would cost him nearly what he

Cybertoys for Everyone in the House

Electronic slaves, spy games, twisted logic.



The Telemaster 2000 phone helps organize your life.

VALET IN A PHONE

My telephone has become my personal valet. No, it doesn't bring me tea or fetch my Batman suit, but it does wake me up, tell me my daily appointments, and prompt me throughout the day when it's time to get going. Rolodex's Telemaster 2000 stores up to 2000 contacts with phone numbers and addresses and will dial them at the touch of a button. But it's Telemaster's ability to share this information with my PC (and other Rolodex hand-held organizers) that has made me dependent. And with the optional $29.95 PC Link, a hardware-software combo, I can send names and phone numbers in ASCII format from my PC directly to the phone's memory, and vice versa. It's a clunky process, but it works. Appointments or to-do lists must be entered directly into the phone using the Telemaster's keypad. If you can stand all the setup, this is ultimately a convenient device. Now if I could only find a fax machine that would help me fight bad guys. —*Michael S. Lasky*

- **Telemaster 2000** $129.95 list; Rolodex; 800/727-7656. Grade: C+

Reader service no. 699

PLAYING SPY

The leading Russian presidential candidate has been assassinated, and the president of the U. S. may be next. It's up to you, a top CIA operative in the post–Cold War era, to protect the chief executive and preserve peace. Spycraft is as close to the life of a spy as a game gets: Former CIA director William Colby, and Oleg Kalugin, former major general of the KGB, collaborated on this disc, giving it enough realism to satisfy any thrill-seeker. You'll track bullet trajectories, analyze satellite photos, encounter double agents, and discover nuclear weapon stockpiles—this is the stuff good paperbacks are made of. You'll be hooked from the start. Just don't blow your cover! —*Angela Freeman*

- **Spycraft: The Great Game** $49.95 list; Activision; 800/477-3650. Grade: A

Reader service no. 700

ZOOMBINI LOGIC

It's not easy being a Zoombini. First they're run off Zoombini Isle by a clan of bossy Bloats. Then on the way to their new homeland, the wanderers are faced with the scariest hazards this side of Indiana Jones. Your task is to guide them to safety.

Kids 8 to 12 will enjoy selecting their own intrepid band of Zoombinis, whose mix and match features suggest a kinship to Mr. Potato Head. Don't be fooled by the game's whimsical feel, though—each of the 12 puzzles requires some sophisticated thinking skills, from logic to pattern recog-

PHOTO: BEVERLY HARPER; ICONS: JOHN HERSEY; ILLUSTRATIONS: TOP: MICHAEL JANG; RIGHT: BILL RUSSELL

paid for it to get it fixed. Upset, Lettaw faxed a letter to Canon pointing out that even a refurbished printer should last more than one year. Within 2 hours, he got a call from Canon. They offered to exchange his printer for another refurbished one, with no questions asked. Four days later the replacement printer arrived at his door, along with prepaid shipping for returning the old one.

Have a Seat

You probably already have an ergonomic workstation at the office, but what about the chair you sit in at home? Is it destroying your back? How about your neck? Your wrists? If you're ready to shop for an ergonomic chair but aren't sure what to look for, help is available. The New York Committee for Occupational Safety and Health has created a pamphlet called "Have a Seat." It tells you how to evaluate an ergonomic chair and even rates 25 commonly available models. The eight-page pamphlet costs $4.95 plus $1 postage and handling from NYCOSH (275 Seventh Avenue, 8th Floor, New York, NY 10001, 212/627-3900).

Homework Help

Want a night off from helping the kids do homework you barely understand? Check out the Online Tutor offered through Wow, CompuServe's new family-oriented online service (800/943-8969). Your kids can get homework help from the same tutors that help child stars like Macaulay Culkin. These certified teachers are ready to answer questions after school and on weekends, and they promise to get back to the kids within a reasonable time. There is no surcharge above the regular cost of Wow, which is $17.95 per month, with no hourly access charges.

By Christina Wood

TAKE NOTE: If you're interested in music, check out the Casbah (http://casbah.dmn.com). Search by artist or song title or just browse to turn up Internet links to the music you seek.

Featuring a unique compilation of royalty-free† music clips, Corel® Stock Music Library is the convenient and cost-effective way to add an interesting musical element to your multimedia presentations or product demonstrations. The library features music clips of three varying lengths to help you save on editing time. The ten CD-ROMs included offer 352 minutes of original melodies and encompass 21 different music categories. Ranging from corporate to classical, rhythm and blues to ambient and with 103 individual tunes to choose from, Corel® Stock Music Library offers music for every occasion.

COREL® STOCK MUSIC LIBRARY

Over 100 Royalty-Free† Stock Music Clips

INCLUDES 21 CATEGORIES OF MUSIC

- Adult Contemporary
- Ambient
- Americana
- Choral
- Christmas
- Classical
- Corporate
- Country & Western
- Global Affairs
- Industry
- Jazz
- Latin & Caribbean
- Lifestyle
- New Age
- Pop/Dance
- Rhythm & Blues
- Rock/Metal
- Science & Nature
- Sports
- Various
- World Music

Use Corel® Stock Music Library clips with:

- Digidesign Session
- Digidesign Sound Designer II
- Digital Audio Lab EdDitor Plus
- Innovative Quality Software SAW Plus
- Macromedia Deck II
- Macromedia SoundEdit
- Passport Designs Alchemy
- SEK'D Samplitude Studio
- Sonic Foundry Sound Forge

...and other sound-editing programs

$39.00*

High-quality, original music in CD Audio and WAV file formats

Circle 63 on reader service card

†Royalty-free rights do not include public performance rights.

Corel is a registered trademark of Corel Corporation in Canada, the United States and/or other countries.
All other product and company names are trademarks or registered trademarks of their respective companies.

LEOPOLD MUSIC

Enter the Corel $3,000,000 World Design Contest!
(September '95 to July '96)
To receive a faxed copy of the contest rules and an entry form, please call:
1-613-728-0826, ext. 3080, Document # 1125.
To leave a message:
1-613-728-0826, ext. 81609.
To send a fax: 1-613-728-2891.

Since 1982 ComputAbility Consumer Electronics

Call Now!
1-800-554-1635

KUR-0231-US

*US$ plus applicable taxes and shipping.

COREL®
http://www.corel.com
Call now for faxed literature!
1-613-728-0826 ext. 3080
Document # 1099

nition to set theory. For example, at Pizza Pass you must determine which combination of pizza toppings will please the Tree Trolls. At the Hotel Dimensia, rooms are available to Zoombinis according to their physical features—you have to figure out who checks in where. Who knew math could be this much fun? —*Anne Kandra*

- **Logical Journey of the Zoombinis** $40 list; Broderbund Software; 800/521-6263, 415/382-4700. Grade: A

Reader service no. 701

DESKTOP GARDENING

According to Martha Stewart, gardening is America's number one activity. If you're a member of this flourishing group, LandDesigner 3D is a valuable tool. Before you get your hands dirty, LandDesigner walks you through planning a garden: mapping out the landscape, preparing the soil, and compiling a shopping list with estimated costs. In addition, you can look up information on some 2000 plants—complete with photos from the White Flower Farms nursery catalog. Once you've laid out your landscape on screen (viewing in 3-D for a virtual walk-through), you can place your nursery order from the program, print, and start tilling. One caution: If you haven't used a design program before, give yourself time to learn. Then next spring, you can start smelling the flowers. —*Leslie Crawford*

- **LandDesigner 3D** $54.95 list; Sierra Online; 800/757-7707. Grade: A-

Reader service no. 702

VIRTUAL COUNSELOR

What do you want to be when you grow up? I'm torn between writing and riding bucking broncos—despite the insistence of Career Counselor that it's impossible to have two different aspirations. This program asks questions about what you'd like to do, then gives you a list of jobs. I said I wanted to write, edit, *direct movies*, and be a rodeo clown. The program doubted my sincerity. Fine, I deselected direct movies. Career Counselor told me I could be a manager of blue-collar workers, a mathematician, a secretary, or a writer/editor. Um...yeah...I see a common thread there. And that list is based on what I *want*, not my aptitude. Then the program calculated earning potential and presented interviews with people who do those jobs. If you have a teenager who's trying to figure out what's out there, let them browse. But don't expect "career counseling." This is just a picture book of jobs. —*Yael Li-Ron*

- **Kaplan's Career Counselor** $39.95 street; Kaplan Interactive; 800/527-4836, 212/752-1840. Grade: C

Reader service no. 703

Gearheads' cute toys will have you hooked.

WAR OF THE TOYS

Forget educational value. Forget exploring an alternate universe. Fire up Gearheads for obsessive, mindless fun. The game's object is to pit your players against your opponent's to score points. You get a toy box of wind-up players, each silly and beautifully rendered: Ziggy the cockroach is fast and agile; Kangruffian, the pugilist kangaroo, delivers a fast right hook. All you do is aim your army and fire them at enemy lines. Once the toys hit the game board, they'll do as they please—score a point for you, die, or score a point for the enemy. This game won't entertain for hours, but you may find the impulse to play a quick one becomes an obsession. —*Christina Wood*

- **Gearheads** $39.95 list; Philips Media Games; 310/444-6609. Grade: B

Reader service no. 704

GET SMART

Kids may play games to have fun, but competitive adults want to prove they're smarter than their friends. Smart Games Challenge #1 lets you demonstrate your genius. This collection of 20 games includes the usual brainbenders—anagrams, cryptograms, picture puzzles—plus a few unique challenges. In Native Tongue you master a fictional language, while Car Jam tests your valet parking skills. Once you've completed each puzzle you can post your score to a Web site (http://www.smartgames.com) and become eligible for cash prizes. The games are challenging and occasionally addictive, but the disc's obtuse instructions, bland visuals, and cheesy soundtrack keep its IQ in the double digits. —*Daniel Tynan*

- **Smart Games Challenge #1** $29.95 list; RandomSoft; 800/788-8815. Grade: C+

Reader service no. 705

BUZZ AND WOODY, TAKE 2

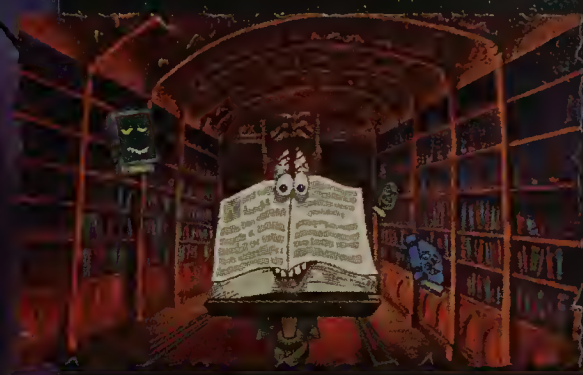
I'm often as much a kid as my kids. So I was excited to get Toy Story, Disney's latest animated CD-ROM storybook. It didn't disappoint. The animation is terrific, and the jokes are funny on multiple levels—something for the kids and something for the over-18 crowd. Every screen is chock-full of animation; some scenes are predictable, but others—such as Buzz and Woody coming to blows at the gas station—are surprisingly funny. Besides the four structured games, there are several activities—like helping the toys get out of Sid's room or helping Woody knock Buzz out the window. As with most storybook discs, older kids will tire of the activities, but it's a safe bet that the six-and-under set will keep coming back for more. —*Roberta Furger*

- **Disney Animated Storybook, Toy Story** $35 street; Disney Interactive; 800/900-9234, 818/543-4300. Grade: B+

Reader service no. 706

COREL® CD HOME

For every secret there's a price to pay!



In Dracula's library there's no time to read!

Mix and fix, stir and bubble!

Help the wicked witch complete her potion!

DRACULA'S SECRET™

A howl of a game on CD-ROM with spine-tingling graphics!

$39*

For Windows® 3.1x
and Macintosh®
Runs on Windows® 95

From the makers of CorelDRAW™.

Dracula's Secret is a challenging and fun-filled game on CD-ROM that will transport you to a weird and wacky world where nothing is quite what it seems. Can you find the Count's castle and unravel the mystery within? Outwit the mischievous creatures of the night as you play and all will be revealed!

Circle 49 on reader service card

Since 1982 ComputAbility Consumer Electronics

Call Now! 1-800-554-1635

KUR-0248-USA

*US$ plus applicable taxes and shipping.

http://www.corel.com
Call now for faxed literature!
1-613-728-0826 ext. 3080
Document # 1198
10,000,000 CD ROMs shipped!

Enter the Corel $3,000,000 World Design Contest! (September '95 to July '96) To receive a faxed copy of the contest rules and an entry form, please call: 1-613-728-0826, ext. 3080, Document # 1125. To leave a message: 1-613-728-0826, ext. 81609. To send a fax: 1-613-728-2891.

Corel is a registered trademark of Corel Corporation. Windows is a registered trademark of Microsoft Corporation. Macintosh is a registered trademark of Apple Computer, Inc. All product and company names are trademarks or registered trademarks of their respective companies.

Compaq and Micron Slash System Prices

Price wars continue: You get more for your money.

BY KIRK STEERS

Dell's Dimension P-100t grabbed the number one slot this month by offering a sweet combination of performance and price. And Micron—in response to big price cuts from Compaq—managed to cling to the number two slot by trimming close to $400 off the price of its Home MPC Pro.

Dell's Dimension P-100t is the machine of choice for a tight budget. It combines a very palatable $2099 price tag with solid service and reliability. And even though it's no P-166, in our testing, this P-100 machine outperformed many systems with meatier CPUs. It's not heavily laden with fancy extras—there's no family entertainment software or friendly interface—but it does have Microsoft Office 95 Professional.

Micron's Home MPC Pro is still the fastest home system we've tested and comes with a 17-inch monitor and an Iomega Zip drive. With the recent $351 drop in price, you certainly get your money's worth. This isn't the easiest machine to assemble and use, however: It has lots of components and no user interface for novices. It comes with Microsoft Office instead of an integrated package like Microsoft Works. Micron sells only through mail order.

Compaq's Presario 9240 ranked number four last month, but with a $300 price cut it inched up the chart to number three. This reasonably fast 133-MHz machine boasts our favorite feature: a PD-CD-ROM drive that looks like your average unit but is both a 4X CD-ROM drive and a rewritable optical drive. Once you're done playing Myst, pop in a special disc and copy up to 650MB to it. (Extra discs sell for around $40 apiece.) **Compaq's Presario 9234**, though merely a 120-MHz model, is also a great buy. Its low price, excellent reliability, and solid performance make it a good family choice.

HP's Pavilion 7130P is a stylish machine with a curvy sports-car look from a company with a stellar reputation for reliability. It's a snap to set up, and the custom interface guides novices around the system. Best of all, the built-in, snapshot-size color scanner and EasyPhoto software will have you building a digital photo album in seconds. The preproduction unit we tested is probably slower than the version you'll find on store shelves.

One notable system that didn't make the chart: the new Acer Aspire P-166 minitower. The Aspire's charcoal gray case would look stylish in your living room, and the system's thoughtful design earned it the highest ease-of-setup rating we've seen yet. But its unexceptional performance, and the company's lackluster service and reliability scores, kept the Acer Aspire out of the running.

Kirk Steers is a PC World *contributing editor.*

TOP 5 HOME PCs

	Price	Overall rating	Reliability/service rating	PC WorldBench score	Setup rating	Multimedia compatibility	Extra-value points	CPU	RAM (MB)	Hard drive (GB)	CD-ROM drive	Reader service number
1 Dell Dimension P-100t 800/613-3355	$2099	75	77/77	150	58	95	1 [1]	P-100	16	1	6X	803
2 Micron Home MPC Pro 800/223-6571	$3197	74	76/69	194	73	95	7 [2]	P-166	16	1.2	6X	804
3 Compaq Presario 9240 800/345-1518	$2998	74	76/71	147	78	100	6 [3]	P-133	16	1.2	4X	805
4 Compaq Presario 9234 800/345-1518	$2498	73	76/71	129	78	100	1 [4]	P-120	16	1.6	4X	806
5 Hewlett Packard Pavilion 7130P 800/724-6631	$3098	72	78/66	126 [5]	88	100	6 [6]	P-133	16	1.6	6X	807

Test systems include a 15-inch monitor and a 28.8-kbps modem, unless otherwise noted.

For more information about all products in this article, circle reader service no. 915.

BEST BUY

[1] Microsoft Office Professional.
[2] 17-inch monitor, Iomega Zip drive, Microsoft Office.
[3] Answering machine, rewritable PD-CD-ROM drive.
[4] Answering machine.
[5] We tested a prototype; shipping unit may be faster.
[6] Answering machine, built-in color scanner, image editing software.

Methodology The overall rating includes ratings for reliability and service (30 percent), price (20 percent), PC WorldBench test results (20 percent), setup (10 percent), multimedia compatibility (10 percent), and extra-value items (10 percent). Reliability and service ratings are based on results of PC World's Reliability and Service Monitor survey. For a description of the PC WorldBench 1.0 tests, see the Test Report in this month's system review. We gave up to 100 points for ease of setup, clarity of documentation, and quality of user interface. To derive the multimedia compatibility scores, we evaluated the installation and use of five popular multimedia titles and six applications for a maximum score of 100. Extra-value points are given for hardware and software that set a machine apart from the competition.

The Best in Interactive Medical Education

Corel® Medical Series

Epilepsy

Epilepsy is a predisposition to recurrent seizures, with various etiologies. An epileptic seizure is an abnormal and excessive focal or generalized discharge of brain neurons usually accompanied by an observable behavioral abnormality.

Epilepsy features:

- Graphic and intuitive interface
- Instructional digital videos
- Text search and retrieval
- Cut and paste capabilities for user projects
- Enlargeable illustrations and photos
- Case study
- Ability to create, customize and annotate slide shows and presentations
- Complete bibliography and reference list
- Directional questions and self-evaluation quizzes
- Medical term definitions and pronunciations

Corel's Medical Series titles are ideal for:

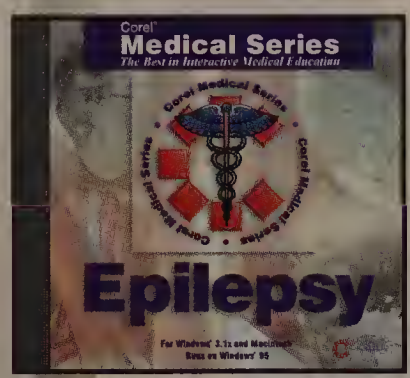
- Medical students
- Residents and interns
- Physicians and clinicians
- Libraries
- Nurses
- Physiotherapists
- Patients and families
- Teachers and professors
- Special interest groups

Upcoming titles:

- AIDS and the Public
- Alzheimer's and Related Dementias
- Arthritis and the Arthritic Hip
- Asthma and Chronic Obstructive Lung Diseases
- Breast Feeding
- Child Behavior
- Child Care CD
- Child Care Family Handbook
- Everyone's Guide to Cancer Therapy
- Headaches
- Infertility
- Mobility Aids
- Multiple Sclerosis
- Pediatric Renal Anomalies
- Sleep Disorders
- Stroke
- The Amputee
- The Immune System

Circle 76 on reader service card

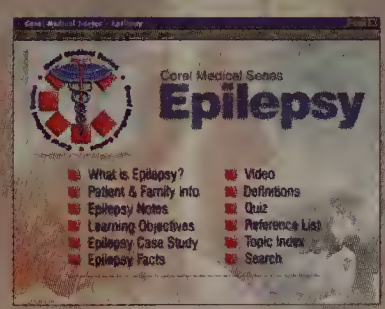
All products are trademarks or registered trademarks of Corel Corporation in Canada, the United States and/or other countries.



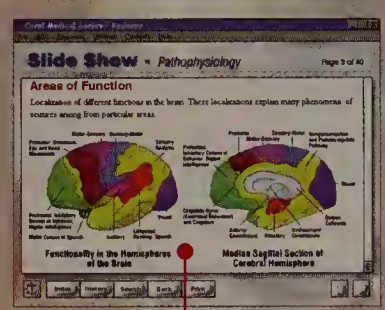
$24.98*

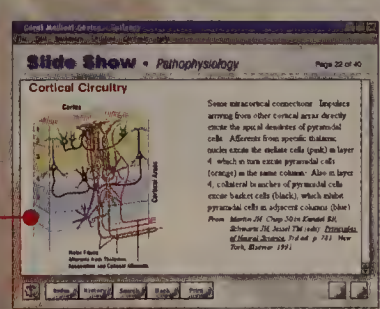
Written by a neurologist with a special interest in the field of epilepsy:
A. Guberman M.D., F.R.C.P. (C).
Professor of Neurology, University of Ottawa

The first title in the Corel® Medical Series covers the topic of epilepsy from various perspectives, including pathophysiology, epidemiology, diagnosis and treatment, in a comprehensive, problem-based interactive format. This multimedia title provides a wealth of up-to-date information on this rapidly expanding area of medical research and offers in-depth analysis of all aspects of epilepsy. This indispensable CD-ROM is an invaluable resource for medical students, physicians, neurology and psychiatry residents, nurses and especially patients and their families.

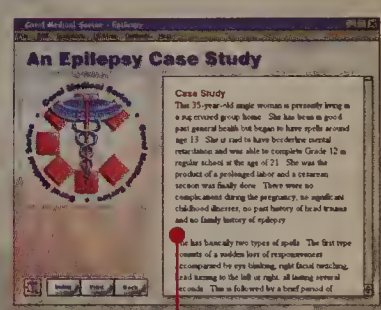


Videos
Set up as an audio-visual exercise to examine various types of seizures.





Slide Show
Includes a search feature, allowing self-navigation through all text and images.



Case Study
The real-life case study provides an overview of the typical problems associated with epilepsy.

KUR-0144-US

ATTENTION MEDICAL PROFESSIONALS!
If you are a medical professional interested in having your research material published by the world leader in CD-ROM technology, please call Corel Corporation for information on our new Medical Series product line:
1-613-728-0826 ext. 3080. Ask for Document # 1170.

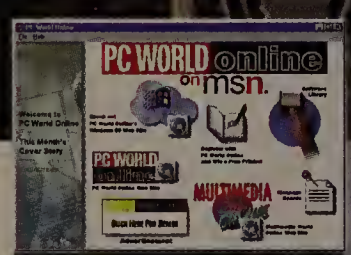
The Learning Zone™ **1-800-304-0253**

COREL®
http://www.corel.com
Call now for faxed literature!
1-613-728-0826 ext. 3080
Document # 1151

*US$ plus applicable taxes.

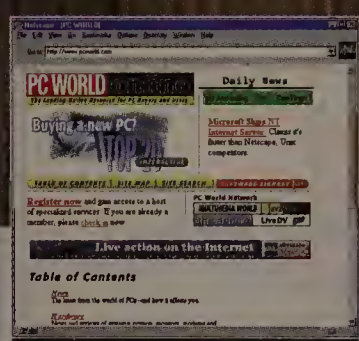
The Corel® Medical Series Titles provide information on the topics described. The information should not be considered medical advice and is not a substitute for a consultation with a medical professional. If you have any questions regarding any of the information in the Corel® Medical Series, please consult your physician.

PC WORLD ON ROCKET FUEL
PC WORLD ON STEROIDS
PC WORLD ONLINE

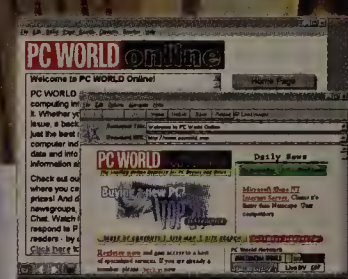


The Microsoft Network

America Online



World Wide Web



Prodigy

CompuServe

If you're an incisive reader, you already know about the award-winning articles, the in-depth product reviews, and the valuable insights that make *PC World* the chosen resource for savvy business managers worldwide.

Now imagine all that plus daily news briefs, natural language article searches, downloadable software demos, and technical support resources. That's PC World Online!

What's more, we offer reports from the PC World Test Center, ScreenCam™ product reviews and tips, RealAudio files, topical messaging and conferencing services, and real-time expert assistance and advice from the editors you know and trust.

It's just part of the dramatic difference you'll experience when you're on PC World Online.

PC World Online does more than just bring you articles online. We greatly improve the way you buy and use PCs by letting you *customize* the information you want to receive based on *your* interests and needs. Our new Interactive Top 20™ will help you find the perfect system to match your computing requirements. Got a tip, gripe, or a burning question? Interact with editors, industry experts and other online users on hundred of topics in our real-time discussion forums and chat areas.

You can't miss PC World Online, because we're everywhere you are. Check out our sites on America Online, CompuServe, The Microsoft Network, Prodigy and the Web.

If you want to get more from your PC experience, connect to PC World Online...*the* leading online resource for PC buyers and users!

PC World Online Spotlights for July '96:

- **TipWorld delivers valuable tips via E-mail to your PC each business day. Check out http://www.tipworld.com**
- **Cover Story: Best Products of 1996! Did your favorite hardware or software product earn a World Class Award?**
- **PC World Online Plus charter offer! Get more from your favorite Web site at http://www.pcworld.com/pluscharter**
- **Follow PC World Daily News, for late-breaking coverage of the PC industry.**
- **No-Nonsense Guide to Internet Providers: We'll help you find the right service!**
- **Download VRSOCCER.EXE, a FREE trial version of VR Soccer in our file library!**

PC WORLD online

◆ **America Online:** keyword pcworld
◆ **CompuServe:** go pcworld
◆ **Prodigy:** jump pcworld
◆ **The Microsoft Network:** go to pcworld
◆ **Web:** http://www.pcworld.com

Circle 172 on reader service card

SMILE MONITORS...YOUR FULL LINE MONITOR SOURCE, FROM 9" TO 21". SATISFY YOUR EXPECTATIONS FOR PRICE, PERFORMANCE, AND EXCELLENT RELIABILITY...WITH A SMILE. AT SMILE WE'RE DEDICATED TO PROVIDING THE BEST MONITOR FEATURES TO DEMANDING VALUE CONCIOUS USERS...

Picture Perfect Smiles

- HIGH RESOLUTION
- IMAGE SHARPNESS & CLARITY
- 3-YEAR LIMITED WARRANTY
- "GREEN" AND LOW RADIATION
- MICROPROCESSOR CONTROLS*
- PLUG & PLAY FOR WINDOWS "95**

*REV 3,5,7 SERIES MODELS
**REV 5 SERIES MODELS

To receive further information about our total line of monitors, call toll free
1(800) 876-4532 (ext. 3366)
or E-mail...SMILEKFC@AOL.com
SMILE USA
California, Texas and New Jersy
SMILE Worldwide
Germany, France, Benelux, Pacific Rim

SMILE

Smile is the U.S. subsidiary of Kua Feng Corporation...
A worldwide leader in manufacturing quality, reliable, price performance monitors.

PC WORLD TOP 10 Monitors

CHIP TIP July 1995

The Smile **CB1716SL...**Hitachi CRT, 0.28 dot pitch, 1280 x 1024 resolution, on-screen digital controls (including tilt and parallelogram adjustments), plug & play capability, MPR-II, dynamic focusing

Circle 206 on reader service card

When My Backup Crashed

How I survived a hard disk crash and a lemon of a backup.

BY STEVE BASS

The noise was loud. At first, I thought someone had taken a chain saw to my tree. Then panic set in—I don't *have* a tree. It was my hard disk suffering its final death throes. But I was in for an even worse surprise: My backup was totally useless. Believe me, you don't want to go through what I did these past few weeks. Listen to my story, and heed my warnings.

At first, I thought I was in pretty good shape for someone with a dead drive. I was fully backed up, and I even had a new hard disk in the closet. But when I started to restore my programs and data with Conner's Backup Exec software, the tape stalled halfway through. I rebooted and tried again. The system froze. With heart in hand, I went to my second tape. 'File Not Readable' flashed on the screen. I tried everything from booting with a plain-vanilla floppy disk, to sending my tapes to Conner tech support, to spinning on one leg while whistling an off-Broadway tune. Nothing doing.

I won't bore you with all the gory details, but I finally concluded that my tape drive, a Conner 3200 Internal SCSI, is a lemon—and one so cunningly sour it fooled my software into telling me it was sweet. Just to be sure, I did a full backup on yet another new tape. The compare routine said everything was fine. But the restore failed, with unreadable files.

Sure I'm angry. Hey, I'm the guy who's been telling *PC World* readers to back up their hard disks for years. And I've followed my own advice religiously. But when the bits hit the fan, I discovered that my tape drive had been messing things up without even telling me.

PASS THE PLATTERS

My last shred of optimism was pinned on the one company I'd hoped I would never need: Ontrack Data Recovery. Ontrack takes expired hard drives and attempts to recover the data. That's a great service, and they'll respond—and work on your drive—24 hours, seven days a week. But I felt my stomach churn at their fees. Diagnosis is $200, and the recovery charge ranges from $300 to $1800 (there's no charge if they can't recover the data). Obviously, this is not something that you would do for a drive full of games, but if vital data is at stake, the price is worth it.

I was impressed with Ontrack's efficiency. Within just 4 hours of my call, a perky courier (well sure, it wasn't his data) picked up the drive. They called with a progress report daily until, on the third day, they had a final analysis: The data was unsalvageable.

I had no choice but to spend five long and torturous days reinstalling programs, tweaking configurations, and (worst of all) reentering data. All the while grumbling and planning new backup strategies. (The Conner tape drive is now a doorstop, a job it shares with my old hard disk.)

BACK UP THE BACKUP

So how can you protect yourself against similar catastrophes? The ideal solution would be to restore your entire backup to another hard disk every once in awhile, just to make sure you can. If that's not practical, back everything to tape, and then make additional copies of important data files on floppies. Yep, it's time-consuming, but hey, I'm still reconstructing a database.

The experience was unnerving, but there was a silver lining. I was able to clear away megabytes of deadwood programs I rarely use and some I didn't even remember I had, giving me the opportunity to upgrade to Windows 95 with a clean slate. And to find another tape drive. Stay tuned.

- **Ontrack Data Recovery** fees vary; 800/872-2599, 612/937-5161, 612/937-5750 (fax)
  Reader service no. 672

Contributing Editor Steve Bass is a licensed marriage and family therapist and the president of the Pasadena IBM Users Group. He can be reached on PC World Online (see page 14 for more information).

TALK TO US: You can e-mail the editors of the PC World @Home section at home@pcworld.com, and write to us at 501 Second St. #600, San Francisco, CA 94107. We're eager to hear your responses and opinions about any topic related to home computing.

IDG INTERNATIONAL DATA GROUP

PC World™ (ISSN 0737-8939) is published monthly at $29.90 for one year (12 issues), $59.80 for two years (24 issues), $89.70 for three years (36 issues) by PC World Communications, Inc., 501 Second St. #600, San Francisco, CA 94107. Foreign orders must be prepaid in U.S. funds with additional postage. Add $20 per year for Canada and Mexico; add $46 per year for airmail for all other countries. Canadian GST Registration #R124669680. Periodicals postage paid at San Francisco and additional mailing offices. Canada Post International Publications Mail Product, (Canadian Distribution) Sales Agreement No. 0463566. POSTMASTER: Send address changes to *PC World*, Subscription Dept., P.O. Box 55029, Boulder, CO 80322-5029. Editorial and business offices: 501 Second St. #600, San Francisco, CA 94107, 415/243-0500. Copyright © 1996, PC World Communications, Inc. All rights reserved. The trademark *PC World* is owned by International Data Group and used under license by PC World Communications, Inc. *PC World Top 20*™, *Top 20*™, *PC World Top 10*™, *Top 10*™, *PC World Top 100*™, *Top 100*™, and *Consumer Watch*™ are trademarks of International Data Group, Inc., and used under license by PC World Communications, Inc. Printed in the United States.

ILLUSTRATIONS: TOP LEFT, JAMES YANG; BOTTOM RIGHT, JOHN HERSEY

DELL® LATITUDE® LM P100SD
100MHz PENTIUM® PROCESSOR

- NEW Multimedia Notebook
- ★ **11.3" SVGA Dual Scan Color Display**
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- ★ **Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery**
- ★ **PCI Bus with 128-bit Graphics Accelerator**
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery
- ★ **Touchpad/IrDA-1 Port**
- Under 7 pounds*
- Extendable 1 Year Warranty
- ★ ***Upgrade to 24MB of RAM, add $699.***
- ★ ***Upgrade to an 810MB hard drive, add $200.***

Business Lease: $104/Mo.
Order Code #800049

NEW Multimedia Dell Latitude LM Notebook

$2799

THE THEATER NEAR YOU JUST GOT NEARER.

Introducing the Dell® Latitude® LM notebook. The multimedia notebook with graphics so impressive, it's like having a theater on your lap. Boasting MPEG software and the Neo-Magic 128-bit graphics accelerator, it delivers video so clear you can run film clips in your presentations. The SVGA (800x600) screen lets you see even more of a good thing. And what's best, this system's built around Dell's Lithium Ion battery. Which means your graphics can dazzle crowds for hours and hours.

This multimedia maestro is not coming soon. It's already here. To order, call us today.

intel inside pentium PROCESSOR

DELL®

TO ORDER
800-433-6649
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03144

REMEMBER, THE MONEY YO
SAVE COULD BE YOUR OWN

200MHz PENTIUM® PRO PROCESSOR
DELL DIMENSION XPS Pro200n

- Mini Tower Model
- 32MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- NEW Imagine 128 Series 2 Graphics Accelerator with 4MB VRAM
- 8X EIDE CD-ROM Drive
- MS® Office Professional with Bookshelf for Windows® 95 (N.F.I.)
- Microsoft® Windows NT™/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty†

★ *Upgrade to 64MB of EDO memory, add $699.*
★ *Upgrade to 1 Year of Windows NT software support, add $149.*
★ *Upgrade to 2GB SCSI hard drive, add $375.*

$3649
Business Lease◊: $131/Mo.
Order Code #500274

200MHz PENTIUM PRO PROCESSOR
DELL DIMENSION XPS Pro200n

- Mini Tower Model
- 16MB EDO Memory
- 256KB Internal L2 Cache
- 2.5GB Hard Drive [10.5ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

★ *Upgrade to 32MB of EDO memory, add $299.*
★ *Upgrade to 3 Years of On-site^ Service, add $99.*
★ *Upgrade to the Imagine 128 Series 2 with 4MB VRAM, add $329.*

$2799
Business Lease: $104/Mo.
Order Code #500273

200MHz PENTIUM PROCESSOR
NEW DELL DIMENSION XPS P200s

- Mini Tower Model
- 32MB SDRAM Memory
- 512KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 17LS Monitor (15.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- 28.8 Data/Fax Modem
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

★ *1.6GB/3.2GB Travan Tape Back-up, add $249.*

$3449
Business Lease: $128/Mo.
Order Code #500272

200MHz PENTIUM PROCESSOR
NEW DELL DIMENSION XPS P[illegible]

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

★ *Upgrade to 32MB of SDRAM memo add $299*

PICTURED SYSTEM

$2499
Business Lease: $92/Mo.
Order Code #500271

166MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P166s

- Mini Tower Model
- 32MB SDRAM Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15TX Trinitron Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- AWE32 Wave Table Upgrade Card
- Altec Lansing ACS-31 Speakers
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

$2799
Business Lease: $104/Mo.
Order Code #500270

133MHz PENTIUM PROCESSOR
DELL DIMENSION XPS P133c

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 2.5GB Hard Drive [10.5ms]
- 15LS Monitor (13.7" v.i.s.)
- 9FX Motion Graphics Accelerator with 2MB VRAM
- 8X EIDE CD-ROM Drive
- MS Office Professional with Bookshelf for Windows 95
- Microsoft Windows 95/30 Days Free Support/MS Mouse
- 3 Year Limited Warranty

★ *Upgrade to 512KB Pipeline Burst Cache, add $49.*

$2199
Business Lease: $81/Mo.
Order Code #500269

133MHz PENTIUM PROCESSOR
DELL DIMENSION P133t

- Mini Tower Model
- 16MB EDO Memory
- 256KB Pipeline Burst Cache
- 1.6GB Hard Drive [10ms]
- 15LS Monitor (13.7" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty

★ *3Com® EtherLink® Interface Combo Card, add $99.*
★ *28.8 Data/Fax Modem, add $129.*
★ *ACS-31 Speakers and AWE32 Sound Card, add $219.*

$1799
Business Lease: $67/Mo.
Order Code #500268

100MHz PENTIUM PROCESSOR
DELL DIMENSION P10[illegible]

- Mini Tower Model
- 8MB EDO Memory
- 256KB Pipeline Burst Cache
- 850MB Hard Drive [12ms]
- 14XE Monitor (13.19" v.i.s.)
- 64-bit PCI 1MB DRAM Video
- 4X EIDE CD-ROM Drive
- Microsoft Windows 95/30 Days Free Support/Dell Mouse
- 3 Year Limited Warranty

★ *Upgrade to 16MB of EDO memory add $99.*
★ *Upgrade to a 1.6GB hard drive, add $90.*

$1449
Business Lease: $54/Mo.
Order Code #500267

NEW STANDARD 3 YEAR LIMITED WARRANTY WITH ALL DELL DIMENSION SYSTEMS.

‡Pricing is not discountable. †For a complete copy of our Guarantees or Limited Warranties, please write Dell USA L.P., 2214 W. Braker Lane, Suite D, Austin, TX 78758. ◊Business leasing arranged by Leasing Group, Inc. *System weight with floppy drive in options bay. ^On-site service provided by BancTec Service Corporation. On-site service may not be available in certain remote locations. ★Prices and specifications valid in the U.S. only and subject to change without notice. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. MS, Microsoft, Windows and the Windows logo are registered trademarks and Windows NT is a trademark of Microsoft Corporation. XJACK is a registered trademark of US Robotics Mobile Communications Corporation. 3Com and EtherLink are registered trademarks of 3Com Corporation. ©1996 Dell Computer Corporation. All rights reserved.

133MHz PENTIUM PROCESSOR
DELL LATITUDE XPi P133ST

- NEW Network-ready Notebook
- 11.3" SVGA Active Matrix Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty†

★ *Dell Latitude DeskDock™ station with Advanced Port Replicator, add $229.*

PICTURED SYSTEM

$3899‡

Business Lease: $140/Mo.
Order Code #800047

133MHz PENTIUM PROCESSOR
DELL LATITUDE LM P133ST

- NEW Multimedia Notebook
- 12.1" SVGA Active Matrix Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds*
- Extendable 1 Year Warranty

★ *Upgrade to a 1.3GB hard drive, add $400.*
★ *2nd Lithium Ion Battery, add $249.*

PICTURED SYSTEM

$3499‡

Business Lease: $129/Mo.
Order Code #800051

100MHz PENTIUM PROCESSOR
DELL LATITUDE XPi P100SD

- NEW Network-ready Notebook
- 10.4" SVGA Dual Scan Color Display
- 8MB EDO RAM/540MB Hard Drive
- 256KB L2 Cache
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Sound with Built-in Dual-ported Speaker
- Smart Lithium Ion Battery with Advanced Power Management
- 19mm Optical Trackball
- IrDA-1 Port
- 3.5" Floppy Drive
- 6.1 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to a 1.2GB hard drive, add $400.*

$2699‡

Business Lease: $100/Mo.
Order Code #800053

100MHz PENTIUM PROCESSOR
DELL LATITUDE LM P100SD

- NEW Multimedia Notebook
- 11.3" SVGA Dual Scan Color Display
- 8MB RAM/540MB Hard Drive
- 256KB L2 Cache
- Options Bay accepts 4X CD-ROM, 3.5" Floppy Drive (both included) or Optional 2nd Li-Ion Battery
- PCI Bus with 128-bit Graphics Accelerator
- Integrated 16-bit Stereo Sound
- Smart Lithium Ion Battery with Advanced Power Management
- Touchpad/IrDA-1 Port
- Under 7 Pounds
- Extendable 1 Year Warranty

★ *Upgrade to 16MB of RAM, add $299.*

$2799‡

Business Lease: $104/Mo.
Order Code #800049

BUILD PERFORMANCE WITH THESE OPTIONS.

DELL DIMENSION	ADD
1.6GB/3.2GB Travan Tape Back-up	$249
3 Year Next-business-day, On-site Service	$99
28.8 Data/Fax Modem	$129
Win95 Mechanical Keyboard	$29
3Com EtherLink III Network Interface Card	$79

DELL LATITUDE	ADD
Additional 8MB RAM	$299
Additional 16MB RAM	$699
810MB Hard Drive Upgrade	$200
28.8 XJACK®/Cabled Modem	$259
External Dell 4X CD-ROM	$359
3Com Ethernet 10BASE-T Network Card	$159
Leather Carrying Case	$129

DIRECT NEWS ON THE INTERNET
For free updates on Dell's product offerings, pricing and other news electronically, send an email message to "DirectNews-request@dell.com." Please use the word "subscribe" as the body of your message.

DELL®

TO ORDER

800-433-6687

http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03145

DELL DIMENSION
Reliable PCs For High Performance Computing

DELL DIMENSION™ XPS P200s
200MHz PENTIUM® PROCESSOR

- Mini Tower Model
- 16MB SDRAM Memory
- 256KB Pipeline Burst Cache
- ★ **1.6GB Hard Drive [10ms]**
- ★ **15TX Trinitron Monitor (13.7" v.i.s.)**
- 9FX Motion Graphics Accelerator with 2MB VRAM
- ★ **8X EIDE CD-ROM Drive**
- MS® Office Professional with Bookshelf for Windows® 95
- Integrated Sound Blaster 16 Sound
- Altec Lansing ACS-5 Speakers
- Microsoft® Windows 95/30 Days Free Support/MS Mouse
- ★ **3 Year Limited Warranty with 1 Year On-site Service†**
- ★ ***Upgrade to 3 Years of On-site Service for only $99 more.***

Business Lease◊: $92/Mo.
Order Code #500271

NEW 200MHz with SDRAM

$2499

GET THE MOST INCREDIBLE MEMORY EVER.

(JUST TO BE SAFE, WRITE DOWN OUR PHONE NUMBER.)

Dell's featured computer artist is Diane Fenster of Pacifica, CA.

It's the memory of the future: Synchronous Dynamic RAM (SDRAM to you). And this new 200MHz Pentium chip-based Dell Dimension XPS P200s has it. Finally, your PCs won't be held back by the limitations of asynchronous EDO memory. Finally, with everything tied to the same clock, you can enjoy smooth, predictable performance at astonishing speeds. Finally, you can have a hedge against obsolescence. And the technology once reserved only for high-end workstations can be on your desktop. So check out the specs, limber up your dialing finger and give us a call now. Come to think of it, maybe you should tie a string around that finger first.

DELL®

TO ORDER
800-433-5904
http://www.dell.com

Mon-Fri 7am-9pm CT • Sat 10am-6pm CT
Sun 12pm-5pm In Canada: call 800-232-6978

Keycode #03143

intel inside pentium PROCESSOR

Designed for Microsoft® Windows®95